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Summary of Aircraft Results for
1978 Southeastern Virginia Urban
Plume Measurement Study of Ozone,
Nitrogen Oxides, and Methane

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Joe J. Mathis, Jr., and Daniel I. Sebacher

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National Aeronautics
and Space Administration

**Scientific and Technical
Information Office**

SUMMARY

Aircraft measurements made during the 1978 Southeastern Virginia Urban Plume Study (SEV-UPS) are presented. The data are from the aircraft that was equipped to monitor ozone, nitrogen oxides, methane, dewpoint temperature, and temperature. The data from two additional aircraft, for approximately 10 surface effluent monitoring stations, and for numerous meteorological stations are presented in separate reports. Approximately 50 hr of flight data (9 experimental days) are presented. The format of this report is data presentation.

The 1978 SEV-UPS field program, conducted July 10 to August 2, is an element in the long-term National Aeronautics and Space Administration (NASA) commitment to develop the necessary technology to exploit the inherent capabilities of Earth satellite systems to monitor the Earth's environment and resources. A number of remote sensing systems that are under development are being used both on aircraft platforms and from surface sites to develop a basic understanding of those environmental problems associated with the troposphere that may be amenable to solution through the use of remotely sensed data. The SEV-UPS activity is a tropospheric remote sensor evaluation program.

The 1978 SEV-UPS field program was designed to provide correlative data (in situ) for evaluating an ozone remote sensor (the laser absorption spectrometer) and for providing additional scientific insight into ozone-precursor relationships in an aging urban plume. While meteorological conditions were less than optimum during the test period, the SEV-UPS data base (the data in the subject report and the other SEV-UPS reports) is sufficient for

- (1) An evaluation of the laser absorption spectrometer
- (2) An analysis of ozone concentrations in the southeastern Virginia area during periods in which O_3 and precursors are transported into the region from the north
- (3) An analysis of an aging urban plume downwind of the major source area of the southeastern Virginia region

Data analysis is currently being done in these areas. These data analyses are not discussed in the present report.

INTRODUCTION

The Southeastern Virginia Urban Plume Study (SEV-UPS, ref. 1) is an element in the long-term National Aeronautics and Space Administration (NASA) commitment to develop the necessary technology to exploit the inherent capabilities of Earth satellite systems to monitor the Earth's environment and resources. A number of remote sensing systems that are under development are being used both in airborne platforms and from surface sites to develop a basic understanding of

those environmental problems associated with the troposphere that may be amenable to solution through the use of remotely sensed data.

The first phase of SEV-UPS was conducted in 1977 (ref. 2), when airborne and surface instruments were used to characterize the production of the secondary pollutant ozone that was downwind of the urban complex. These measurements revealed the characteristic oxidant diurnal cycle at ground level, with the oxidant concentration in an air parcel nearly doubling as the air parcel moved downwind of the populated areas over primarily rural agricultural areas. The second phase of SEV-UPS was conducted in the summer of 1978, when airborne and surface instruments were again used to characterize the production of ozone that was downwind of the urban complex; in addition, an airborne remote ozone sensor, the laser absorption spectrometer, was used. Experimental objectives differed on the various days of the study and ranged from correlative data missions for comparing in situ and remotely sensed ozone data to comprehensive urban plume studies to provide data for correlation with photochemical and pollutant transport models. Supporting measurements of meteorological parameters, mixing-layer height, and ozone precursors (nitrogen oxides and hydrocarbons) were also measured both at the surface and at altitude. Participating in the 1978 SEV-UPS field program were NASA Langley Research Center and NASA Wallops Flight Center, the Jet Propulsion Laboratory, the Virginia State Air Pollution Control Board, and Old Dominion University. Measurement systems included approximately 10 surface pollutant monitoring sites, three airborne platforms (all equipped to monitor ozone), and numerous sites for observing meteorological parameters. In addition to ozone, aircraft 1 was equipped to monitor nitrogen oxides, methane, dewpoint temperature, and temperature; aircraft 2 to monitor carbon monoxide, methane, nonmethane hydrocarbons (NMHC), and nitrous oxide; and aircraft 3 to monitor remotely sensed ozone (total burden from the aircraft to the surface). The data from the 1978 SEV-UPS field program are being reported in several separate reports.

This report summarizes the data gathered on aircraft 1 for ozone, nitrogen oxides, methane, dewpoint temperature, and temperature. The data represent 9 experiment days and a total of about 50 total hr of flight data. In addition, the report discusses each experiment conducted during the 3-week test program, focusing on experiment purpose and design, the data taken, and the level of participation by the various aircraft.

Use of trade names or names of manufacturers in this report does not constitute an official endorsement of such products or manufacturers, either expressed or implied, by the National Aeronautics and Space Administration.

SYMBOLS AND ABBREVIATIONS

DME	distance measuring equipment
EDT	eastern daylight time
h	altitude, m
LaRC	NASA Langley Research Center

ODU	Old Dominion University, Norfolk, Virginia
ppb	parts per billion by volume
ppm	parts per million by volume
ppt	parts per trillion by volume
T	temperature, °C
T _{dp}	dewpoint temperature, °C
V	airspeed, m/sec
VHF	very high frequency
VIMS	Virginia Institute of Marine Science, Wachapreague, Virginia
VOR	VHF omnidirectional range
VORTAC	VHF omnidirectional range tactical air navigation
WFC	NASA Wallops Flight Center
X ₀	ordinate shift (see fig. 9)

EXPERIMENTAL PROGRAM

SEV-UPS Test Region

Location and topography.— The southeastern Virginia area, approximately 36.8° N and 76.4° W, is located in midlatitudes on the east coast and has a climate which is temperate, is rainy without a dry season, and has warm summers. It is centered around Hampton Roads, which is one of the world's largest natural port areas. The cities of Norfolk, Portsmouth, Virginia Beach, and Chesapeake are located on the east and southeast sides of the area, and Newport News and Hampton are on the northwest and north sides (fig. 1). The northwest and southeast sides of Hampton Roads contain the larger population centers, whereas the western and adjacent southern sides are relatively sparsely populated. The most densely populated sections in the area are located southeast of Hampton Roads, along the southern and eastern branches of the Elizabeth River.

The topography of the region is low and flat; as an example, the elevation above mean sea level of Norfolk is 5 m. To the southwest of the region lies the Dismal Swamp, which extends into North Carolina. As one goes westward, the terrain slopes imperceptibly upward to a distance approximately 240 km west of the area; here the land rises sharply into the Appalachians, with elevations averaging 1000 to 1200 m above mean sea level.

Climatology (summer).— In the summer, the meteorology of the area is frequently governed by a semipermanent (slow-moving) high-pressure cell located

off the coast. These cells, commonly known as "Bermuda highs," result in frequent southwest winds that are in evidence at all weather stations throughout the region. Northwest winds, which are primarily an aftermath of cold fronts, are rare, and when they occur are considerably weaker than their spring or winter counterparts. A sea breeze generally prevails; however, this breeze does not extend too deeply inland and is therefore seldom observed at locations which are about 16 km inland. During the summer, a gentle south to southwest prevailing wind is evident at all weather stations during the night and is due to the coupling of the circulation around the Bermuda high and the night land breeze. Other wind directions during the summer are infrequent. Both day calms and night calms are frequent in summer; wind speeds average 4 m/sec during the day and 3 to 3.6 m/sec at night. Little difference in wind speed and direction exists between the individual months or between the individual months and the average summer winds.

The winds for the month of July deviate most, but not greatly, from the two other summer months. In July, the Bermuda high is strongest and produces a higher frequency of day and night southwest winds than occurs in June or August. Sea breezes are also slightly reduced in July since the warming coastal waters, along with the closer location of the Gulf Stream, reduce the land-water midday temperature contrasts. The frequency of northwest winds, although low in June and August, is even lower during July, which is the month of highest temperature. July has the lowest wind speeds of any month of the year, both day and night.

Selection rationale.— The southeastern Virginia urban area possesses several unique features which make it a favorable site for urban plume studies. The Norfolk area (major source area in the region) is bounded on the northeast by the Chesapeake Bay and Eastern Shore (Accomac and Northampton Counties), on the east by the Atlantic Ocean, on the south by rural and agricultural areas, and on the southwest by the Dismal Swamp. The regional population center, the cities of Norfolk, Portsmouth, Chesapeake, Virginia Beach, Newport News, and Hampton, may be encompassed by a 40- by 40-km square. The area is flat, with a mean elevation of 5 m above mean sea level. It has many heavily traveled roads, numerous military bases, major shipping, several hydrocarbon storage and refining sites, and moderate industrial activity. Depending on the direction of the predominant airflow at the time of measurements, the area can provide opportunities for study of the (1) effect of urban sources on ambient "clean" air, (2) composite effect of urban sources and ambient "dirty" air, and (3) downwind aging characteristics of the urban plume over emission-free areas such as water and rural land masses.

Description of Experiment

For the 1978 SEV-UPS field program, approximately eight experiments were designed as candidate experiments for the 3-week test period. Selection of the experiment for a given flight day was dependent on forecasted meteorology, experiment priority, and operational status of the individual airborne platforms and instrumentation. By design, several experiments were to be repeated. Five experiments were flown one or more times. All high-priority experiments were conducted; however, because of operational problems (aircraft and instru-

mentation) and meteorological conditions throughout the 3-week period, some experiments were performed under less than optimum conditions. The five experiments are briefly discussed in the following paragraphs.

Primary experiment.— The primary experiment is designed to document the formation of ozone that was downwind of the urban complex of Hampton Roads for southwest flow (Bermuda high scenario previously discussed). Under these conditions, incoming air to the region (urban complex) is readily characterized, having traveled typically 6 to 8 hr since encountering emissions from a major urban source. Subsequently, the air leaving the Hampton Roads area (source) travels 8 to 10 hr over relatively source-free (agricultural) areas, and during this time the aging urban plume is studied without the complication of additional major emission sources. Typically, the Bermuda high results in a 3- to 5-day period of nearly constant southwest flow. The purpose of the experiment is to characterize the formation of ozone and ozone-precursor relationships downwind of the source area by using both in situ and remote sensors. (An in situ sensor is defined as an instrument which is in direct contact with the measured pollutant. In situ sensors usually provide the pollutant concentration at a point in three-dimensional space. A remote sensor measures an integrated quantity that represents pollutant concentrations within a volume of three-dimensional space. The measurement volume is often removed (some distance) from the sensor location.) Having characterized the oxidant formation from in situ measurements and photochemical and transport modeling, the O₃ remote sensor can be evaluated as applied to an aging urban plume. Figure 2 shows the test region for the primary experiment, the sampling flight legs, and supporting surface stations. Appendix A gives, for the primary experiment as well as the other experiments, a more exact location of each flight leg referenced to the local aeronautical navigational chart (ref. 3). All three aircraft platforms participated in the experiment with preplanned flight times, as shown in table 1. All sampling flights were typically constant-altitude flights below the surface mixing-layer height. Generally, the flight altitudes among the three aircraft differ by only about 150 m (flight safety). The flight plan was designed such that, at specified times, all three aircraft sampled leg E → F simultaneously (within 10 to 15 min) for data comparison. In addition, at specified locations, aircraft 1 performed vertical spirals from 150 to 1500 m to identify mixing-layer height and to obtain vertical structure of O₃, NO, and NO_x, CH₄, dewpoint temperature, and temperature. The primary experiment was performed twice during the field program. On each day, meteorological conditions were less than optimum. For the July 27 primary experiment, southwest winds occurred; however, temperatures and solar intensity were less than optimum for strong oxidant generation. During the July 21 primary experiment, anticipated southwest winds did not develop until early evening of the same day. As a result, the flown flight plan (for southwest flow) was invalid.

Regional traverse experiment.— The regional traverse experiment is designed to map pollutant specie concentrations at the boundaries of the southeastern Virginia area and to identify, for various meteorological conditions, the location of maximum O₃ into and out of the region. Only aircraft 1 participated in the experiment. Initial plans called for the use of the remote sensor aircraft (aircraft 3) to compare the in situ and remotely obtained O₃ data in order to evaluate the effectiveness of the remote sensor for identifying O₃ concentra-

tion in the incoming and outgoing air for the region. Each day of the regional traverse experiment, instrument or aircraft problems prevented use of the remote sensor. The regional traverse was performed three times during the 3-week test period. Figure 3 shows the test region and flight paths. The time of day for the experiment was typically from 1100 to 1500 EDT. Each day a constant flight altitude (600 to 900 m) was selected such that it was below the mixing layer. Vertical spirals (150 to 1500 m) were made at selected points to obtain vertical structure and mixing-layer height information.

Remote sensor calibration experiment.— The purpose of the remote sensor calibration experiment is to calibrate the O₃ remote sensor through extensive correlative data flights with the in situ O₃ instrument of aircraft 1. The experiment strategy was to extensively sample a single flight leg during a 2-hr period (1100 to 1500 EDT) with both aircraft. Figure 4 shows the sequence of events for the remote sensor aircraft. Figure 5 shows the in situ aircraft flight. Figure 6 shows the location of the flight leg. The calibration was performed twice. Meteorological conditions for the July 19 flight were reasonably good. The July 20 experimental flight plan was modified and then terminated due to extensive cloudiness.

Photochemical oxidant box experiment.— The purposes of the photochemical oxidant box experiment are to provide a data base for comparison with a single-box photochemical model of an urban source and to assess the utility of remotely sensed data to a photochemical box model. In addition, the resultant model can be used in the design and analysis of other remote sensor evaluation experiments. The test area and flight legs are shown in figure 7. The test area is an approximate 30- by 30-km box centered over the major source area (NO, NO_x, and hydrocarbons) of the region. The sampling strategy is to traverse at constant altitude (generally below the mixing layer) the flight legs of the box, once each hour from 0600 to 1700 EDT. In addition, a pollutant vertical profile is obtained each hour. Both aircraft 1 and 3 participated in the measurement program. Table 2 shows the designed sampling schedule. Desired meteorological conditions for the box experiment were the southwest flow conditions discussed for the primary experiment. As a result of meteorological conditions and availability of the aircraft (near the end of the experimental period), a backup oxidant box experiment (fig. 7) designed for west airflow was flown on July 24, 1978. Toward midafternoon of July 24, a frontal passage occurred which resulted in a wind-direction change affecting the results of the experiment.

Hydrocarbon grab sample experiment.— Figure 8 shows the test area for the grab sample experiment conducted August 2, 1978. The purpose of the experiment is to obtain hydrocarbon grab samples (below the mixing layer) for laboratory analysis to determine the mix of hydrocarbons being emitted from the major source area in the southeastern Virginia area. These measurements can provide additional source inputs for the photochemical modeling of the area. The desired meteorological condition was southwest flow; however, the experiment was performed on August 2 (last day of aircraft availability) with south to southeast winds. Experiment time was designed to be from 0700 to 0900 EDT, which corresponded to maximum automotive traffic flow. Only aircraft 1 was flown.

Aircraft 1 Flight Plan and Instrumentation

This section, as well as the remainder of the text, discusses only aircraft 1 operations and data. As previously mentioned, other aircraft data, surface data, and meteorological data are presented in separate reports. The basic experiments have been discussed, and schematics of the flight legs are shown in figures 2, 3, 6, 7, and 8. Tables 3 to 11 describe in detail the exact flight sequence of aircraft 1 for each of the experimental days.

Table 12 lists the instrumentation flown on aircraft 1. References 4, 5, and 6 of the table discuss the instrumentation installation onboard the aircraft and the measurement techniques. Instrument systems for measuring altitude, airspeed, and heading are discussed in reference 4, as is the basic aircraft configuration. Aircraft 1 (twin engine) is equipped with specially designed nose probes for sampling undisturbed free-stream air. This air can be ducted to instruments located in the nose cargo and/or aft passenger cabin of the aircraft. The O₃ instrument is located in the aft passenger cabin (next to NO/NO_x instrument, see ref. 4) and sample air is supplied from the same nose probe as for the NO/NO_x instrument. However, the inlet probe and sample lines are modified (as compared with those described in ref. 4) in that the probe and sampling lines are either Teflon¹ or Teflon lined. A detailed laboratory study of both the O₃ and NO/NO_x instrument installation showed that accurate O₃ and NO/NO_x concentrations were measurable. A discussion of that program is beyond the scope of this report but did include investigation of pressure (altitude) effects on instrument sensitivity, effluent losses in the sampling lines, and validation of sampling procedures.

During the August 2 flight (fig. 8), hydrocarbon grab samples were taken for laboratory analyses to determine hydrocarbon mix in the SEV-UPS source area. The sample containers used were 2-liter electropolished stainless-steel cans fitted with metal bellows valves. These cans were filled to 3 to 4 N/m² (4 to 6 psi) by passing sample air through a stainless bellows pump. The pump sample inlet (stainless-steel tubing) was attached to the aircraft sampling manifold at the NO/NO_x inlet location (ref. 4). The NO/NO_x instrument was not operated during the flight. Reference 7 discusses these types of sample containers (and others), sample storage, and sample laboratory analysis as a function of time after collection. Analysis was performed by a contractor laboratory that was experienced in the analysis of ambient-air hydrocarbon grab samples. Each sample was analyzed for four major groups of compounds: C₂ to C₅ light hydrocarbons, C₆ to C₁₀ aliphatics, C₆ to C₁₀ aromatics, and halocarbons. Analyses were performed by gas chromatography using flame ionization detection, except for the halocarbons, which were analyzed by electron-capture detection. In addition to the 10 samples taken during the mission, two background samples (hydrocarbon-free air) were taken with the aircraft system on the ground to evaluate the effects of any aircraft inlet-system contamination on the hydrocarbon content of the grab samples.

¹Teflon: Registered trademark of E. I. du Pont de Nemours & Co., Inc.

Instrument Calibration

Each instrument described in table 12 was calibrated in the laboratory prior to the start of the 3-week test program. In the case of the primary effluent monitoring instruments (O_3 , NO/NO_x , and CH_4), calibration was also performed at the completion of the test program. In addition, at periodic times during the 3-week program, frequent checks were made of instrument sensitivity, electronic gain factors, and/or response to zero levels of effluent concentration. All calibrations were performed at approximately mean sea level, and the effluent data reported have not been corrected for altitude effects on instrument sensitivity. Altitude corrections for effluent data below about 1500 m are generally not significant. Table 13 summarizes the instrument calibration and accuracy of the reported data.

Data Reduction

Each instrument onboard the aircraft provided continuous analog signals to the data acquisition system. The data acquisition system records the continuous analog signals on magnetic tape (4-hr tape). Data reduction consists of digitizing the analog tape at 10 records/sec and averaging the digitized records over a specified time period. For the 1978 SEV-UPS program, the averaging interval was selected to be 10 sec. Figure 9 illustrates the effect of the averaging interval on the resolution of the data. The ozone data were selected for illustration purposes. In the figure, O_3 concentrations across leg A \rightarrow E (July 17) are shown for five averaging times, ranging from 1 sec to 90 sec. Note that for display purposes, each curve of the figure has had the ordinate shifted X_0 ppb. For a 10-sec average interval and an approximate aircraft ground speed of 50 m/sec (generally used for SEV-UPS), each reported data point in the tables and figures represents a spatial distance of about 500 m. For data spirals, aircraft climb or descend rates were nominally about 2.5 m/sec; thus for the spiral data, each reported data point represents an average over about 25 m of altitude.

DATA RESULTS

The data measured onboard aircraft 1 during the 1978 SEV-UPS field program are presented in this section. For each experiment day, the effluent data are tabulated in appendix B as 10-sec averages. Where appropriate, data (mainly O_3) are shown in graphical format for the convenience of the reader. The reader is reminded that additional data for each experiment are presented in separate reports covering the other aircraft data, surface pollutant results, and meteorological data. In the following sections, aircraft data are presented in chronological sequence.

July 12, 1978: Regional Traverse Experiment

The test area and detailed flight plan of aircraft 1 have been shown in figure 3 and table 3. The flight altitude was approximately 760 m, with sampling from about 1230 to 1515 EDT. As previously discussed, of the three air-

craft, only aircraft 1 participated in the experiment. Figure 10 shows the O₃ data obtained. Analysis of wind direction at about the 600-m level indicates a flow from the northerly direction. As noted in table 3, due to operator error involving the data acquisition system, only O₃ data (backup recorder) are available. Table B1 tabulates the data as 1-min averages. (These are the only data presented as 1-min averages; all others are 10-sec averages.)

July 17, 1978: Regional Traverse Experiment

The detailed flight information for July 17 for the regional traverse experiment is shown in figure 3 and table 4. The flight altitude was approximately 320 m, with the experiment being performed from about 1120 to 1500 EDT. Only aircraft 1 participated in the experiment. Figure 11 shows the O₃ data, and wind analyses show airflow into the southeastern Virginia region from a northerly direction. Table B2 tabulates the effluent data. As seen in the table, CH₄ data are available only for legs A → E and WFC → L. For this flight (and for others to be presented), operational problems frequently occurred with the CH₄ instrument which invalidated some of the measurement data. These problems resulted in loss of data either for complete flights, isolated flight legs, or several minutes during a flight leg. These problems were traced to one of three instrument functions:

- (1) Temperature drift during instrument warm-up
- (2) A mirror located in the optical system, for which sudden turbulence on the aircraft resulted in temporary misalignment
- (3) Calibration sequence (in flight) initiated to identify items (1) and (2)

July 18, 1978: Regional Traverse Experiment

The flight information associated with the July 18 regional traverse experiment is shown in figure 3 and table 5. The flight altitude was approximately 420 m, with sampling from 1125 to 1500 EDT. Again only aircraft 1 participated in the flight. Figure 12 shows the O₃ data. Wind conditions for the test are complex and dynamic as a result of an eastward moving high-pressure cell. Analyses show that the air coming into the area is from the south, but winds in the test region range from south to west, depending upon time of day and station location. Table B3 tabulates the data.

July 19, 1978: Remote Sensor Calibration Experiment

The detailed flight information for the July 19 remote sensor calibration experiment is shown in figure 6 and table 6. Both the remote sensor aircraft (aircraft 3) and aircraft 1 participated in the experiment. Sampling times were from about 1230 to 1430 EDT. Figure 13 shows the vertical spiral data (O₃, temperature, and dewpoint) taken at point B (fig. 4), whereas figure 14 shows the constant-altitude ozone data (points A to C) at altitudes of 236, 537,

and 833 m. Visibility for the flight was bright and clear, with little cloud interference for the experiment. Table B4 shows the data.

July 20, 1978: Remote Sensor Calibration Experiment

Flight information for the remote sensor calibration experiment is shown in figure 6 and table 7. Both aircraft 1 and 3 provided data, with sampling occurring between 1200 and 1300 EDT. Cloud overcast in the test region minimized the test results, and the experiment was terminated early due to this overcast. Table B5 summarizes the data.

July 21, 1978: Primary Experiment

The flight information associated with the July 21 primary experiment is shown in figure 2 and table 8. The flight times for the experiment were approximately 0850 to 1720 EDT. All three aircraft made measurements. Figures 15 and 16 illustrate some of the constant-altitude flight data for O_3 . Figure 17 shows the ozone concentrations along leg E → F at various times during the day. Meteorological conditions did not result in the anticipated southwest flow for the experiment. A weak, coastal low-pressure cell developed in the Cape Hatteras area. Its development and movement north resulted in an airflow change from southerly to northwesterly by midmorning. After passage of this low-pressure cell, winds became southwesterly by the evening of July 21. Figure 18 shows typical O_3 vertical profiles obtained during the day. Table B6 shows the 10-sec averaged data.

July 24, 1978: Photochemical Oxidant Box Experiment

Flight information for the experiment is shown in figure 7 and table 9. Both aircraft 1 and 3 participated in the experiment. Sampling was at an altitude of 270 to 290 m, starting at about 0540 EDT and continuing beyond 1600 EDT. During the experiment, a frontal passage traversed the test area, which resulted in unanticipated wind conditions. Forecasted winds of southwest to west became northwest by midmorning and easterly by midafternoon. Figures 19 and 20 show O_3 concentration on legs A → B and G → H at various times of the day. Figure 21 shows data from one of the many vertical spirals at point A. Note the large NO_x concentration at about 760- to 780-m altitude and the resultant decay in O_3 at the same altitude. Data of this type suggest the presence of a NO/NO_x source in the vicinity of point A. Several times during the 1978 SEV-UPS program, measurements were noticed to be influenced by local point sources, and thus some awareness of the local area and existing meteorological conditions for the experiments must exist before detailed analysis of each experiment is attempted. Table B7 tabulates the 10-sec averaged data.

July 27, 1978: Primary Experiment

Flight information for the primary experiment is shown in figure 2 and table 10. As was the case for the July 21 primary experiment, all three air-

craft participated, and sampling was from 0850 to 1720 EDT. Flight altitude was approximately 600 m. Southwest airflow did occur as anticipated for this experiment. The July 27 experiment is selected to illustrate the type of data available from a typical experiment; thus, almost all in situ O_3 data for this experiment will be shown graphically. Figures 22 to 26 show morning and afternoon composite plots for the test region for O_3 , NO_x , and CH_4 . Figures 27 to 31 show altitude profiles of O_3 , NO , NO_x , temperature, and dewpoint. Tabulated results are in table B8.

Comparison of morning O_3 results (fig. 22) with afternoon O_3 results (fig. 25) shows results similar to those discussed in references 1 and 2 for the southeast Virginia region and southwest flow. Morning results show little difference in O_3 concentrations upwind or downwind of the Norfolk area, with average O_3 approximately 70 ppb. In the afternoon, upwind O_3 concentrations are still approximately 70 ppb, whereas downwind concentrations are typically 90 to 110 ppb. Downwind O_3 concentrations on the afternoon of July 27, 1978, are not as high as those of August 4 and 5, 1977 (ref. 2), because temperatures and solar radiation are lower for the 1978 data as compared with the 1977 data. Nitrogen oxides data for the afternoon (fig. 26) appear somewhat lower than observed in the morning (fig. 23). All nitrogen oxides data are lower than observed in 1977 (30 to 40 ppb) and are approaching the detection limits of the instrument. The effect of point sources on the NO_x data can be seen in figure 26, especially on the third most-northern leg. The observed NO_x peak is approximately 30 km northeast of a major power plant and refinery. The location of this NO_x peak compared with the power plant and refinery location supports the southwest airflow scenario for which the experiment was designed. Afternoon CH_4 data are not available due to instrument problems.

August 2, 1978: Hydrocarbon Grab Sample Experiment

Flight information for the grab sample experiment is shown in figure 8 and table 11, including the location at which each grab sample was taken. Only aircraft 1 made measurements, and as noted in table 11, NO/NO_x and CH_4 measurements were not made. Sampling times were from about 0730 to 0830 EDT at an altitude of approximately 250 m. Table 14 gives the results of the laboratory analysis of the hydrocarbon grab samples. Table B9 shows the O_3 data. As shown in table 14 and as discussed by the contractor in the analyses report, all samples showed a low concentration of ambient hydrocarbons that was almost comparable to hydrocarbon-free air. Only ethylene, benzene, and m-xylene were present in all samples, but even these species were well below the concentrations usually encountered in ambient studies. Benzene ranged from a high concentration of 9.7 ppb to a low of 1.4 ppb. Toluene concentration did not parallel benzene. The aliphatic molecules with more than two carbons were essentially absent from all samples. The halocarbon analysis showed dichloromethane to be present in all samples except one of the zero-air samples. The only other electrophilic species identified in the analysis were chloroform and Freon 113.²

²Freon 113: Registered trademark of E. I. du Pont de Nemours & Co., Inc.

Data Summary

Since, in many cases, analysis of the 1978 SEV-UPS data base will be concerned with effluent concentration averages over each of the constant-altitude flight legs, tables 15 to 23 have been prepared to assist these analyses. The data shown are an arithmetic average along the indicated flight leg of the 10-sec data in appendix B. Also shown is the standard deviation associated with each average for each flight leg.

CONCLUDING REMARKS

All data (in situ O_3 , NO/NO_x , CH_4 , dewpoint temperature, temperature, and flight parameters) measured onboard aircraft 1 during the 1978 Southeastern Virginia Urban Plume Study field program are documented in the report. These data, combined with the data (other reports) from aircraft 2 and 3, the surface effluent data, and the meteorological data, provide the inputs required for interpretation and analysis of the data set. Meteorological conditions were less than optimum during the 3-week field program, often resulting (as for July 18, 20, 21, and 24 and August 2) in frontal passage, overcast skies, and wind shifts during experiments designed for bright sunlight and constant wind-direction days. However, the data for these experiments are included in the report as they are believed to be useful for purposes other than those for which the experiments were designed. Concerning the 1978 Southeastern Virginia Urban Plume Study data base and in particular the objectives of the program, the following conclusions are appropriate:

1. From the 1978 data base, sufficient data are available to evaluate and assess the application of the laser absorption spectrometer O_3 remote sensor. The remote sensor calibration experiment of July 19, along with selected data (flight legs) of July 21, 24, and 27, provides ample data for comparison with the remote sensor.
2. The regional traverse experiments of July 12 and 17 were conducted during favorable meteorological conditions, and analysis of the data will document, for these two cases of northerly flow, O_3 behavior in the southeastern Virginia region.
3. The primary experiment of July 27 did occur during the desired southwest flow. Analysis of the data will provide additional insight into urban plume aging and ozone-precursor relationships in the plume. These results can be compared with the 1977 Southeastern Virginia Urban Plume Study data.

Langley Research Center
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Hampton, VA 23665
September 20, 1979

APPENDIX A

LOCATION OF FLIGHT LEGS FOR 1978 SEV-UPS MEASUREMENTS

Tables A1 to A5 show the location of the flight (sampling) legs for each experiment. The locations are given in terms of radial/distance from an aeronautical navigation station or identified location that is shown on the navigational chart of the southeastern Virginia area (ref. 3). Locations from two navigational stations are generally given for each reference point. Table entries have been expanded to include reference points pertinent to the other two aircraft flight plans, as well as aircraft 1.

APPENDIX A

TABLE A1.- LOCATION OF REFERENCE POINTS FOR PRIMARY EXPERIMENTS

[Location given in terms of information in reference 3]

Point	Location, ^a radial/km						
	Salisbury	Snow Hill	Cape Charles	Harcum	Norfolk	Franklin	Other (b)
A	226/36	282/27	-----	-----	-----	-----	-----
B	-----	-----	-----	-----	-----	-----	Wallops Airfield
B'	161/68	147/38	-----	-----	-----	-----	-----
B''	153/95	142/67	-----	-----	-----	-----	-----
C	-----	242/58	8/46	-----	-----	-----	-----
C'	-----	265/75	347/67	-----	-----	-----	-----
D	-----	-----	92/61	-----	60/97	-----	-----
D'	-----	-----	105/86	-----	74/112	-----	-----
E	-----	-----	310/31	89/37	-----	-----	-----
E'	-----	-----	310/51	58/26	-----	-----	-----
F	-----	-----	130/50	-----	73/64	-----	-----
F'	-----	-----	130/69	-----	85/77	-----	-----
G	-----	-----	237/45	-----	330/27	-----	-----
H	-----	-----	187/50	-----	96/18	-----	-----
K	-----	-----	-----	-----	277/39	67/39	-----
L	-----	-----	-----	-----	222/22	93/49	-----

^aLocation given from two aircraft VORTAC or VOR-DME stations as radial/km from station.

^bLocation specifically identified in reference 3.

APPENDIX A

TABLE A2.- LOCATION OF REFERENCE POINTS FOR REGIONAL TRAVERSE EXPERIMENT

[Location given in terms of information in reference 3]

Point	Location, ^a radial/km					
	Salisbury	Snow Hill	Cape Charles	Norfolk	Elizabeth City	Other (b)
A	-----	-----	-----	-----	-----	Hopewell VORTAC
A'	-----	-----	97/47	58/82	-----	-----
B	-----	-----	-----	-----	-----	Patuxent VORTAC
C	-----	-----	-----	-----	-----	Salisbury VORTAC
D	120/44	75/41	-----	-----	-----	-----
E	-----	-----	-----	-----	-----	Snow Hill VORTAC
H	-----	-----	-----	-----	-----	Franklin VORTAC
K	-----	-----	-----	148/49	48/43	-----
L	-----	-----	-----	-----	-----	Chesapeake Light
WFC	-----	-----	-----	-----	-----	Wallops Airfield

^aLocation given from two aircraft VORTAC or VOR-DME stations as radial/km from station.

^bLocation specifically identified in reference 3.

TABLE A3.- LOCATION OF REFERENCE POINTS FOR

REMOTE SENSOR CALIBRATION EXPERIMENT

[Location given in terms of information in reference 3]

Point	Location, ^a radial/km		
	Snow Hill	Salisbury	Other (b)
A	315/22	223/22	-----
B	-----	-----	Snow Hill VORTAC
C	135/39	154/55	-----

^aLocation given from two aircraft VORTAC or VOR-DME stations as radial/km from station.

^bLocation specifically identified in reference 3.

APPENDIX A

TABLE A4.- LOCATION OF REFERENCE POINTS FOR
PHOTOCHEMICAL OXIDANT BOX EXPERIMENT

[Location given in terms of information in reference 3]

Point	Location, ^a radial/km	
	Cape Charles	Norfolk
A	212/74	45/21
B	231/51	315/21
C	205/70	200/12
D	222/44	341/15
E	198/63	155/14
F	210/39	20/16
G	180/56	107/27
H	180/33	60/29

^aLocation given from two aircraft VORTAC or VOR-DME stations as radial/km from station.

TABLE A5.- LOCATION OF REFERENCE POINTS FOR
GRAB SAMPLE EXPERIMENT

[Location given in terms of information in reference 3]

Point	Location, ^a radial/km		
	Cape Charles	Norfolk	Franklin
A	235/45	335/17	-----
B	193/46	82/13	-----
C	226/61	286/20	-----
D	197/61	150/13	-----
E	-----	238/28	90/49
F	-----	180/29	103/77
G	-----	228/43	110/45
H	-----	197/43	115/69

^aLocation given from two aircraft VORTAC or VOR-DME stations as radial/km from station.

APPENDIX B

AIRCRAFT DATA TABULATIONS

Tables B1 to B9 tabulate the O_3 , NO, NO_x , CH_4 , temperature, dewpoint, and altitude data for each mission flown by aircraft 1. With the exception of table B1, all tabulations are 10-sec averages, as discussed in the section of this report entitled "Data Reduction." Appropriate footnotes explain data omissions from the table. Data listings are cataloged in chronological sequence according to Zulu time. For data-analysis purposes, in determining the geographical location of each data point (ref. 3 and appendix A), a constant aircraft ground speed along each flight leg should be assumed and determined by dividing the flight leg distance (see footnotes to tables 15 to 23) by the time required to sample that leg. For each flight leg, the first time entry corresponds to the reference point first mentioned in the table subtitle; the last time entry to the second reference point (i.e., for part (a) of table B1, 16:46:00 is the time at point A; 17:18:00, the time at point B).

APPENDIX B

TABLE B1.- OZONE DATA FOR REGIONAL TRAVERSE EXPERIMENT ON JULY 12, 1978 - DATA

AVERAGED FOR 1 min AT 760-m ALTITUDE

[Zulu time at A = 16:46:00; at B = 17:18:00]

(a) Leg A → B

Zulu time, hr:min:sec	O ₃ , ppb	Zulu time, hr:min:sec	O ₃ , ppb
16:46:00	70	17:03:00	68
16:47:00	70	17:04:00	65
16:48:00	72	17:05:00	64
16:49:00	72	17:06:00	64
16:50:00	73	17:07:00	68
16:51:00	70	17:08:00	62
16:52:00	73	17:09:00	66
16:53:00	66	17:10:00	57
16:54:00	74	17:11:00	58
16:55:00	66	17:12:00	59
16:56:00	70	17:13:00	60
16:57:00	70	17:14:00	61
16:58:00	73	17:15:00	60
16:59:00	68	17:16:00	69
17:00:00	75	17:17:00	60
17:01:00	68	17:18:00	60
17:02:00	66		

APPENDIX B

TABLE B1.- Continued

[Zulu time at B = 17:18:00; at C = 17:39:00]

(b) Leg B → C

Zulu time, hr:min:sec	O ₃ , ppb	Zulu time, hr:min:sec	O ₃ , ppb
17:18:00	60	17:29:00	77
17:19:00	68	17:30:00	84
17:20:00	68	17:31:00	85
17:21:00	65	17:32:00	72
17:22:00	62	17:33:00	84
17:23:00	66	17:34:00	78
17:24:00	60	17:35:00	76
17:25:00	64	17:36:00	80
17:26:00	68	17:37:00	66
17:27:00	67	17:38:00	72
17:28:00	72	17:39:00	64

APPENDIX B

TABLE B1.- Continued

[Zulu time at C = 17:39:00; at D = 17:52:00]

(c) Leg C → D

Zulu time, hr:min:sec	O ₃ , ppb	Zulu time, hr:min:sec	O ₃ , ppb
17:39:00	67	17:46:00	57
17:40:00	68	17:47:00	50
17:41:00	72	17:48:00	46
17:42:00	68	17:49:00	48
17:43:00	68	17:50:00	48
17:44:00	71	17:51:00	44
17:45:00	60	17:52:00	48

APPENDIX B

TABLE B1.- Continued

[Zulu time at D = 17:52:00; at E = 18:05:00]

(d) Leg D → E

Zulu time, hr:min:sec	O ₃ , ppb	Zulu time, hr:min:sec	O ₃ , ppb
17:52:00	48	17:59:00	47
17:53:00	47	18:00:00	60
17:54:00	70	18:01:00	73
17:55:00	47	18:02:00	66
17:56:00	40	18:03:00	64
17:57:00	44	18:04:00	68
17:58:00	48	18:05:00	64

APPENDIX B

TABLE B1.- Continued

[Zulu time at WFC = 18:21:00; at A' = 18:37:00]

(e) Leg WFC → A'

Zulu time, hr:min:sec	O ₃ , ppb	Zulu time, hr:min:sec	O ₃ , ppb
18:21:00	72	18:30:00	84
18:22:00	80	18:31:00	90
18:23:00	76	18:32:00	89
18:24:00	76	18:33:00	88
18:25:00	80	18:34:00	85
18:26:00	77	18:35:00	80
18:27:00	86	18:36:00	80
18:28:00	85	18:37:00	90
18:29:00	100		

APPENDIX B

TABLE B1.- Concluded

[Zulu time at A' = 18:37:00; at H = 19:13:00]

(f) Leg A' → H

Zulu time, hr:min:sec	O ₃ , ppb	Zulu time, hr:min:sec	O ₃ , ppb
18:37:00	90	18:56:00	83
18:38:00	87	18:57:00	76
18:39:00	82	18:58:00	80
18:40:00	86	18:59:00	80
18:41:00	93	19:00:00	87
18:42:00	89	19:01:00	84
18:43:00	86	19:02:00	98
18:44:00	84	19:03:00	92
18:45:00	86	19:04:00	89
18:46:00	89	19:05:00	84
18:47:00	84	19:06:00	88
18:48:00	78	19:07:00	84
18:49:00	70	19:08:00	79
18:50:00	77	19:09:00	76
18:51:00	80	19:10:00	82
18:52:00	77	19:11:00	82
18:53:00	70	19:12:00	85
18:54:00	75	19:13:00	80
18:55:00	78		

APPENDIX B

TABLE B2.- AIRCRAFT DATA FOR REGIONAL TRAVERSE EXPERIMENT ON July 17, 1978

(a) Leg K → H

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
15.21.00	7.065E+01	8.819E+00	1.391E+01		2.341E+01	1.844E+01	2.976E+02
15.21.10	7.134E+01	6.281E+00	1.449E+01		2.348E+01	1.840E+01	3.000E+02
15.21.20	7.200E+01	8.403E+00	1.469E+01		2.347E+01	1.828E+01	2.988E+02
15.21.30	7.517E+01	7.779E+00	1.436E+01		2.357E+01	1.828E+01	3.006E+02
15.21.40	7.438E+01	8.652E+00	1.399E+01		2.366E+01	1.808E+01	2.982E+02
15.21.50	7.817E+01	8.403E+00	1.415E+01		2.366E+01	1.796E+01	2.982E+02
15.22.00	7.751E+01	8.112E+00	1.432E+01		2.360E+01	1.808E+01	3.006E+02
15.22.10	7.372E+01	9.110E+00	1.403E+01		2.360E+01	1.816E+01	3.000E+02
15.22.20	7.170E+01	9.651E+00	1.482E+01		2.367E+01	1.796E+01	2.994E+02
15.22.30	7.388E+01	9.110E+00	1.602E+01		2.361E+01	1.816E+01	2.982E+02
15.22.40	7.085E+01	9.568E+00	1.664E+01		2.362E+01	1.808E+01	2.994E+02
15.22.50	7.177E+01	7.779E+00	1.581E+01		2.360E+01	1.808E+01	2.994E+02
15.23.00	7.035E+01	8.611E+00	1.606E+01		2.366E+01	1.796E+01	3.018E+02
15.23.10	7.174E+01	8.736E+00	1.577E+01		2.370E+01	1.816E+01	2.988E+02
15.23.20	7.029E+01	9.027E+00	1.556E+01		2.375E+01	1.796E+01	3.000E+02
15.23.30	6.906E+01	8.361E+00	1.556E+01		2.387E+01	1.776E+01	2.982E+02
15.23.40	7.161E+01	8.444E+00	1.502E+01		2.389E+01	1.788E+01	2.988E+02
15.23.50	6.969E+01	6.614E+00	1.407E+01		2.411E+01	1.760E+01	2.988E+02
15.24.00	7.194E+01	7.654E+00	1.378E+01		2.417E+01	1.764E+01	2.963E+02
15.24.10	7.091E+01	8.153E+00	1.349E+01		2.418E+01	1.748E+01	2.976E+02
15.24.20	6.996E+01	8.652E+00	1.237E+01		2.426E+01	1.784E+01	3.018E+02
15.24.30	6.860E+01	7.529E+00	1.175E+01		2.436E+01	1.756E+01	2.933E+02
15.24.40	6.959E+01	8.153E+00	1.266E+01		2.428E+01	1.776E+01	3.012E+02
15.24.50	6.679E+01	9.401E+00	1.233E+01		2.430E+01	1.772E+01	2.957E+02
15.25.00	6.765E+01	8.444E+00	1.208E+01		2.427E+01	1.788E+01	3.018E+02
15.25.10	6.692E+01	7.904E+00	1.179E+01		2.431E+01	1.788E+01	2.969E+02
15.25.20	6.633E+01	7.238E+00	1.155E+01		2.427E+01	1.800E+01	3.006E+02
15.25.30	6.557E+01	7.945E+00	1.146E+01		2.423E+01	1.744E+01	2.982E+02
15.25.40	7.144E+01	7.862E+00	1.283E+01		2.429E+01	1.784E+01	3.000E+02
15.25.50	6.834E+01	6.905E+00	1.279E+01		2.439E+01	1.812E+01	2.994E+02
15.26.00	6.359E+01	7.904E+00	1.246E+01		2.435E+01	1.768E+01	2.957E+02
15.26.10	6.573E+01	8.361E+00	1.229E+01		2.417E+01	1.792E+01	3.006E+02
15.26.20	6.534E+01	7.321E+00	1.262E+01		2.418E+01	1.772E+01	2.976E+02
15.26.30	6.421E+01	8.694E+00	1.200E+01		2.422E+01	1.804E+01	3.037E+02
15.26.40	6.306E+01	8.403E+00	1.225E+01		2.432E+01	1.812E+01	3.000E+02
15.26.50	6.345E+01	7.862E+00	1.088E+01		2.444E+01	1.796E+01	2.914E+02
15.27.00	6.510E+01	8.070E+00	9.729E+00		2.433E+01	1.720E+01	2.969E+02
15.27.10	6.636E+01	9.651E+00	9.563E+00		2.422E+01	1.760E+01	2.994E+02
15.27.20	6.524E+01	8.153E+00	1.043E+01		2.425E+01	1.788E+01	2.988E+02
15.27.30	6.388E+01	8.028E+00	1.018E+01		2.430E+01	1.788E+01	2.982E+02
15.27.40	6.487E+01	6.988E+00	1.014E+01		2.431E+01	1.772E+01	2.969E+02
15.27.50	6.481E+01	7.612E+00	1.010E+01		2.430E+01	1.784E+01	3.012E+02
15.28.00	6.213E+01	8.652E+00	1.035E+01		2.438E+01	1.812E+01	3.043E+02
15.28.10	6.098E+01	7.696E+00	1.188E+01		2.446E+01	1.796E+01	2.939E+02
15.28.20	6.184E+01	7.238E+00	1.221E+01		2.447E+01	1.804E+01	3.031E+02
15.28.30	6.022E+01	7.321E+00	1.262E+01		2.445E+01	1.780E+01	2.945E+02
15.28.40	6.289E+01	9.360E+00	1.250E+01		2.441E+01	1.780E+01	3.000E+02
15.28.50	6.355E+01	8.902E+00	1.150E+01		2.441E+01	1.784E+01	2.976E+02
15.29.00	6.507E+01	9.235E+00	1.059E+01		2.451E+01	1.760E+01	2.969E+02
15.29.10	6.418E+01	8.819E+00	1.068E+01		2.448E+01	1.756E+01	2.963E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B2.- Continued

(a) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
15.29.20	6.448E+01	8.112E+00	1.088E+01		2.449E+01	1.744E+01	2.988E+02
15.29.30	6.609E+01	8.236E+00	1.188E+01		2.448E+01	1.696E+01	2.988E+02
15.29.40	6.811E+01	7.779E+00	1.250E+01		2.441E+01	1.704E+01	2.994E+02
15.29.50	6.771E+01	7.654E+00	1.353E+01		2.440E+01	1.764E+01	3.006E+02
15.30.00	6.788E+01	7.696E+00	1.395E+01		2.438E+01	1.720E+01	2.988E+02
15.30.10	6.590E+01	7.737E+00	1.386E+01		2.433E+01	1.732E+01	3.043E+02
15.30.20	6.474E+01	9.152E+00	1.295E+01		2.447E+01	1.704E+01	2.988E+02
15.30.30	6.732E+01	7.904E+00	1.362E+01		2.449E+01	1.656E+01	3.006E+02
15.30.40	6.939E+01	7.612E+00	1.233E+01		2.450E+01	1.652E+01	3.018E+02
15.30.50	6.897E+01	7.904E+00	1.113E+01		2.450E+01	1.636E+01	3.006E+02
15.31.00	6.768E+01	8.860E+00	1.088E+01		2.443E+01	1.648E+01	3.018E+02
15.31.10	6.804E+01	9.027E+00	1.200E+01		2.451E+01	1.648E+01	3.006E+02
15.31.20	6.741E+01	7.696E+00	1.192E+01		2.458E+01	1.660E+01	2.994E+02
15.31.30	6.903E+01	8.486E+00	1.204E+01		2.453E+01	1.692E+01	3.012E+02
15.31.40	6.497E+01	6.281E+00	1.221E+01		2.436E+01	1.724E+01	3.037E+02
15.31.50	6.151E+01	9.193E+00	1.221E+01		2.438E+01	1.684E+01	3.049E+02
15.32.00	6.570E+01	7.280E+00	1.233E+01		2.460E+01	1.708E+01	3.049E+02
15.32.10	6.428E+01	6.822E+00	1.221E+01		2.473E+01	1.772E+01	3.024E+02
15.32.20	6.141E+01	7.113E+00	1.200E+01		2.483E+01	1.776E+01	2.963E+02
15.32.30	6.002E+01	7.238E+00	1.150E+01		2.500E+01	1.796E+01	3.037E+02
15.32.40	6.062E+01	8.819E+00	1.022E+01		2.514E+01	1.776E+01	2.957E+02
15.32.50	6.184E+01	9.235E+00	1.014E+01		2.512E+01	1.748E+01	2.945E+02
15.33.00	6.444E+01	8.444E+00	1.035E+01		2.519E+01	1.752E+01	2.921E+02
15.33.10	6.217E+01	7.238E+00	1.084E+01		2.504E+01	1.764E+01	2.957E+02
15.33.20	6.299E+01	6.489E+00	1.076E+01		2.504E+01	1.732E+01	2.933E+02
15.33.30	6.507E+01	7.612E+00	9.977E+00		2.487E+01	1.752E+01	2.994E+02
15.33.40	6.441E+01	8.028E+00	1.159E+01		2.473E+01	1.748E+01	2.969E+02
15.33.50	6.474E+01	7.404E+00	1.138E+01		2.463E+01	1.724E+01	2.976E+02
15.34.00	6.471E+01	7.196E+00	1.142E+01		2.446E+01	1.728E+01	3.012E+02
15.34.10	6.392E+01	7.446E+00	1.105E+01		2.438E+01	1.720E+01	2.994E+02
15.34.20	6.378E+01	7.488E+00	1.217E+01		2.429E+01	1.708E+01	3.031E+02
15.34.30	6.586E+01	6.406E+00	1.208E+01		2.433E+01	1.716E+01	3.031E+02
15.34.40	6.372E+01	8.070E+00	1.221E+01		2.446E+01	1.728E+01	3.024E+02
15.34.50	6.349E+01	9.152E+00	1.134E+01		2.454E+01	1.720E+01	3.000E+02
15.35.00	6.418E+01	1.023E+01	1.138E+01		2.455E+01	1.728E+01	3.055E+02
15.35.10	6.273E+01	9.484E+00	1.146E+01		2.477E+01	1.724E+01	2.988E+02
15.35.20	6.474E+01	8.361E+00	1.142E+01		2.465E+01	1.708E+01	3.000E+02
15.35.30	6.507E+01	7.987E+00	1.126E+01		2.468E+01	1.672E+01	2.976E+02
15.35.40	6.804E+01	7.072E+00	1.113E+01		2.455E+01	1.660E+01	3.012E+02
15.35.50	6.847E+01	7.488E+00	1.080E+01		2.443E+01	1.704E+01	2.994E+02
15.36.00	6.913E+01	5.782E+00	1.088E+01		2.439E+01	1.708E+01	3.055E+02
15.36.10	6.596E+01	8.153E+00	1.063E+01		2.440E+01	1.724E+01	3.031E+02
15.36.20	6.573E+01	8.195E+00	1.188E+01		2.438E+01	1.756E+01	3.073E+02
15.36.30	6.365E+01	5.532E+00	1.229E+01		2.444E+01	1.756E+01	2.963E+02
15.36.40	6.296E+01	4.534E+00	1.299E+01		2.440E+01	1.776E+01	3.086E+02
15.36.50	6.250E+01	7.155E+00	1.349E+01		2.442E+01	1.756E+01	2.988E+02
15.37.00	6.659E+01	7.945E+00	1.242E+01		2.446E+01	1.764E+01	3.018E+02
15.37.10	6.484E+01	8.528E+00	1.204E+01		2.448E+01	1.760E+01	3.006E+02
15.37.20	6.441E+01	7.238E+00	1.208E+01		2.444E+01	1.728E+01	3.049E+02
15.37.30	6.441E+01	6.489E+00	1.299E+01		2.447E+01	1.756E+01	3.055E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B2.- Continued

(a) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
15.37.40	6.293E+01	6.531E+00	1.250E+01		2.452E+01	1.776E+01	3.043E+02
15.37.50	6.332E+01	8.278E+00	1.208E+01		2.450E+01	1.752E+01	3.012E+02
15.38.00	6.606E+01	8.278E+00	1.179E+01		2.458E+01	1.744E+01	3.043E+02
15.38.10	6.349E+01	8.985E+00	1.167E+01		2.463E+01	1.692E+01	2.963E+02
15.38.20	6.481E+01	7.612E+00	1.192E+01		2.448E+01	1.688E+01	3.049E+02
15.38.30	6.530E+01	7.654E+00	1.270E+01		2.457E+01	1.716E+01	3.037E+02
15.38.40	6.352E+01	6.988E+00	1.213E+01		2.467E+01	1.784E+01	3.067E+02
15.38.50	6.207E+01	6.156E+00	1.175E+01		2.484E+01	1.780E+01	2.957E+02
15.39.00	6.326E+01	7.113E+00	1.237E+01		2.476E+01	1.788E+01	3.037E+02
15.39.10	6.164E+01	6.656E+00	1.184E+01		2.478E+01	1.760E+01	2.957E+02
15.39.20	6.342E+01	8.486E+00	1.254E+01		2.465E+01	1.760E+01	3.024E+02
15.39.30	6.514E+01	7.571E+00	1.370E+01		2.464E+01	1.764E+01	2.994E+02
15.39.40	6.385E+01	7.280E+00	1.275E+01		2.462E+01	1.788E+01	3.049E+02
15.39.50	6.279E+01	7.446E+00	1.171E+01		2.464E+01	1.756E+01	2.963E+02
15.40.00	6.461E+01	7.737E+00	1.167E+01		2.453E+01	1.760E+01	3.018E+02
15.40.10	6.345E+01	7.571E+00	1.188E+01		2.452E+01	1.740E+01	3.012E+02
15.40.20	6.517E+01	7.779E+00	1.200E+01		2.449E+01	1.760E+01	3.024E+02
15.40.30	6.669E+01	7.238E+00	1.163E+01		2.457E+01	1.708E+01	2.976E+02
15.40.40	6.761E+01	6.572E+00	1.142E+01		2.449E+01	1.676E+01	3.018E+02
15.40.50	6.761E+01	6.864E+00	1.063E+01		2.447E+01	1.704E+01	3.031E+02
15.41.00	6.778E+01	6.864E+00	1.084E+01		2.457E+01	1.700E+01	3.031E+02
15.41.10	6.778E+01	8.320E+00	1.088E+01		2.467E+01	1.752E+01	3.037E+02
15.41.20	6.666E+01	7.113E+00	1.080E+01		2.476E+01	1.760E+01	3.006E+02
15.41.30	6.438E+01	7.363E+00	1.204E+01		2.487E+01	1.728E+01	3.031E+02
15.41.40	6.883E+01	7.654E+00	1.242E+01		2.485E+01	1.712E+01	2.969E+02
15.41.50	6.689E+01	6.572E+00	1.316E+01		2.472E+01	1.732E+01	2.988E+02
15.42.00	6.685E+01	8.320E+00	1.262E+01		2.472E+01	1.696E+01	3.018E+02
15.42.10	6.682E+01	6.864E+00	1.101E+01		2.456E+01	1.788E+01	3.037E+02
15.42.20	6.487E+01	6.614E+00	1.109E+01		2.451E+01	1.744E+01	2.988E+02
15.42.30	6.540E+01	7.779E+00	1.229E+01		2.435E+01	1.780E+01	3.055E+02
15.42.40	6.382E+01	7.737E+00	1.299E+01		2.440E+01	1.784E+01	3.031E+02
15.42.50	6.474E+01	8.361E+00	1.266E+01		2.447E+01	1.740E+01	3.006E+02
15.43.00	6.801E+01	8.153E+00	1.262E+01		2.441E+01	1.728E+01	3.073E+02
15.43.10	6.636E+01	9.318E+00	1.275E+01		2.449E+01	1.712E+01	2.976E+02
15.43.20	6.438E+01	8.195E+00	1.283E+01		2.430E+01	1.772E+01	3.092E+02
15.43.30	6.293E+01	8.528E+00	1.167E+01		2.432E+01	1.796E+01	3.018E+02
15.43.40	6.128E+01	7.862E+00	1.043E+01		2.430E+01	1.792E+01	3.079E+02
15.43.50	6.388E+01	8.153E+00	1.030E+01		2.438E+01	1.804E+01	3.006E+02
15.44.00	6.286E+01	9.235E+00	1.130E+01		2.429E+01	1.816E+01	3.049E+02
15.44.10	6.289E+01	7.904E+00	1.076E+01		2.418E+01	1.772E+01	3.073E+02
15.44.20	6.045E+01	7.529E+00	1.237E+01		2.423E+01	1.780E+01	3.031E+02
15.44.30	6.098E+01	9.027E+00	1.213E+01		2.427E+01	1.796E+01	3.110E+02
15.44.40	6.270E+01	8.195E+00	1.324E+01		2.424E+01	1.776E+01	3.012E+02
15.44.50	6.210E+01	8.403E+00	1.233E+01		2.408E+01	1.768E+01	3.092E+02
15.45.00	6.319E+01	8.611E+00	1.192E+01		2.408E+01	1.720E+01	3.055E+02
15.45.10	6.570E+01	8.195E+00	1.196E+01		2.398E+01	1.776E+01	3.067E+02
15.45.20	6.303E+01	8.028E+00	1.299E+01		2.397E+01	1.772E+01	3.128E+02
15.45.30	6.398E+01	8.528E+00	1.163E+01		2.411E+01	1.748E+01	3.043E+02
15.45.40	6.629E+01	7.696E+00	1.068E+01		2.404E+01	1.756E+01	3.116E+02
15.45.50	6.629E+01	7.529E+00	1.126E+01		2.425E+01	1.700E+01	3.006E+02

*No data due to instrument malfunction.

TABLE B2.- Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
15.46.00	6.857E+01	6.988E+00	1.097E+01		2.418E+01	1.704E+01	3.073E+02
15.46.10	6.705E+01	6.531E+00	1.196E+01		2.420E+01	1.748E+01	3.055E+02
15.46.20	6.609E+01	8.444E+00	1.088E+01		2.430E+01	1.808E+01	3.031E+02
15.46.30	6.385E+01	6.697E+00	1.088E+01		2.442E+01	1.836E+01	3.055E+02
15.46.40	6.444E+01	6.156E+00	1.167E+01		2.459E+01	1.816E+01	3.012E+02
15.46.50	6.616E+01	8.444E+00	1.221E+01		2.461E+01	1.792E+01	2.988E+02
15.47.00	6.666E+01	6.156E+00	1.254E+01		2.466E+01	1.752E+01	2.976E+02

27

APPENDIX B

TABLE B2.- Continued

(b) Spiral at H

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
15.51.50	6.890E+01	7.820E+00	1.192E+01		2.562E+01	1.760E+01	1.863E+02
15.52.00	7.194E+01	8.070E+00	1.225E+01		2.525E+01	1.788E+01	2.291E+02
15.52.10	6.916E+01	8.070E+00	1.150E+01		2.459E+01	1.824E+01	2.701E+02
15.52.20	6.695E+01	6.905E+00	1.150E+01		2.435E+01	1.804E+01	2.872E+02
15.52.30	6.903E+01	6.864E+00	1.097E+01		2.426E+01	1.760E+01	3.086E+02
15.52.40	6.936E+01	7.113E+00	1.242E+01		2.391E+01	1.788E+01	3.391E+02
15.52.50	6.897E+01	7.820E+00	1.436E+01		2.375E+01	1.720E+01	3.605E+02
15.53.00	6.864E+01	7.030E+00	1.353E+01		2.344E+01	1.736E+01	3.880E+02
15.53.10	6.989E+01	8.611E+00	1.225E+01		2.304E+01	1.748E+01	4.198E+02
15.53.20	6.494E+01	1.048E+01	1.221E+01		2.278E+01	1.748E+01	4.503E+02
15.53.30	6.316E+01	7.113E+00	1.146E+01		2.256E+01	1.644E+01	4.754E+02
15.53.40	6.702E+01	8.528E+00	1.250E+01		2.231E+01	1.748E+01	4.992E+02
15.53.50	6.362E+01	7.321E+00	1.254E+01		2.202E+01	1.712E+01	5.279E+02
15.54.00	6.408E+01	7.737E+00	1.362E+01		2.176E+01	1.732E+01	5.579E+02
15.54.10	6.237E+01	8.070E+00	1.345E+01		2.133E+01	1.752E+01	5.890E+02
15.54.20	6.171E+01	9.068E+00	1.407E+01		2.119E+01	1.708E+01	6.147E+02
15.54.30	6.471E+01	8.486E+00	1.415E+01		2.106E+01	1.628E+01	6.434E+02
15.54.40	6.322E+01	7.571E+00	1.357E+01		2.095E+01	1.628E+01	6.648E+02
15.54.50	6.557E+01	6.614E+00	1.316E+01		2.072E+01	1.628E+01	6.856E+02
15.55.00	6.233E+01	8.070E+00	1.341E+01		2.065E+01	1.492E+01	7.100E+02
15.55.10	6.547E+01	8.320E+00	1.237E+01		2.066E+01	1.512E+01	7.363E+02
15.55.20	6.778E+01	1.185E+01	1.179E+01		2.072E+01	1.640E+01	7.632E+02
15.55.30	6.840E+01	6.780E+00	1.055E+01		2.062E+01	1.440E+01	7.840E+02
15.55.40	7.019E+01	6.988E+00	8.611E+00		2.036E+01	1.376E+01	8.035E+02
15.55.50	6.689E+01	8.112E+00	9.480E+00		2.040E+01	1.288E+01	8.304E+02
15.56.00	6.999E+01	7.862E+00	7.700E+00		2.032E+01	1.244E+01	8.628E+02
15.56.10	6.844E+01	7.446E+00	8.445E+00		2.023E+01	1.256E+01	8.897E+02
15.56.20	7.167E+01	6.156E+00	9.646E+00		2.024E+01	1.228E+01	9.184E+02
15.56.30	7.388E+01	9.900E+00	1.225E+01		1.997E+01	1.196E+01	9.471E+02
15.56.40	7.418E+01	8.860E+00	1.204E+01		1.970E+01	1.180E+01	9.716E+02
15.56.50	7.055E+01	8.486E+00	1.225E+01		1.943E+01	1.196E+01	1.000E+03
15.57.00	7.025E+01	8.236E+00	1.101E+01		1.889E+01	1.208E+01	1.037E+03
15.57.10	6.857E+01	7.196E+00	1.001E+01		1.912E+01	1.052E+01	1.062E+03
15.57.20	7.421E+01	7.696E+00	1.084E+01		1.904E+01	1.008E+01	1.090E+03
15.57.30	7.378E+01	9.776E+00	1.109E+01		1.916E+01	9.160E+00	1.117E+03
15.57.40	6.755E+01	8.112E+00	1.188E+01		1.901E+01	9.200E+00	1.136E+03
15.57.50	7.038E+01	7.612E+00	1.237E+01		1.861E+01	9.760E+00	1.158E+03
15.58.00	6.966E+01	8.902E+00	1.188E+01		1.860E+01	9.240E+00	1.180E+03
15.58.10	6.745E+01	9.027E+00	1.117E+01		1.840E+01	9.040E+00	1.208E+03
15.58.20	6.837E+01	9.110E+00	9.480E+00		1.829E+01	8.560E+00	1.236E+03
15.58.30	6.491E+01	8.944E+00	9.066E+00		1.805E+01	8.440E+00	1.265E+03
15.58.40	6.349E+01	7.529E+00	1.006E+01		1.768E+01	8.640E+00	1.291E+03
15.58.50	6.431E+01	7.571E+00	9.273E+00		1.752E+01	8.600E+00	1.317E+03
15.59.00	6.659E+01	8.486E+00	9.687E+00		1.735E+01	8.520E+00	1.345E+03
15.59.10	6.471E+01	8.819E+00	1.018E+01		1.707E+01	9.040E+00	1.373E+03
15.59.20	6.563E+01	8.819E+00	9.977E+00		1.686E+01	9.720E+00	1.402E+03
15.59.30	6.893E+01	6.739E+00	1.022E+01		1.663E+01	9.680E+00	1.429E+03
15.59.40	6.666E+01	7.737E+00	1.055E+01		1.650E+01	9.240E+00	1.451E+03
15.59.50	6.573E+01	6.364E+00	1.006E+01		1.639E+01	8.520E+00	1.474E+03
16.00.00	6.339E+01	5.657E+00	9.853E+00		1.649E+01	8.560E+00	1.498E+03
16.00.10	6.887E+01	8.528E+00	1.150E+01		1.644E+01	8.840E+00	1.522E+03
16.00.20	7.309E+01	9.276E+00	1.001E+01		1.625E+01	8.920E+00	1.548E+03
16.00.30	6.821E+01	1.056E+01	9.066E+00		1.612E+01	8.800E+00	1.566E+03

*No data due to instrument malfunction.

APPENDIX B

TABLE B2.- Continued

(c) Leg H → A

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
16.12.10	7.180E+01	9.484E+00	1.233E+01		2.487E+01	1.788E+01	3.055E+02
16.12.20	7.250E+01	7.737E+00	1.155E+01		2.488E+01	1.776E+01	3.073E+02
16.12.30	7.220E+01	8.985E+00	1.221E+01		2.489E+01	1.728E+01	3.073E+02
16.12.40	7.200E+01	7.529E+00	1.014E+01		2.489E+01	1.764E+01	3.086E+02
16.12.50	7.230E+01	8.777E+00	9.811E+00		2.471E+01	1.808E+01	3.147E+02
16.13.00	7.339E+01	8.902E+00	1.167E+01		2.500E+01	1.800E+01	3.079E+02
16.13.10	7.269E+01	1.139E+01	1.163E+01		2.506E+01	1.776E+01	3.043E+02
16.13.20	7.573E+01	9.609E+00	1.217E+01		2.496E+01	1.776E+01	3.104E+02
16.13.30	7.906E+01	7.238E+00	1.229E+01		2.500E+01	1.784E+01	3.110E+02
16.13.40	7.735E+01	6.739E+00	1.146E+01		2.511E+01	1.784E+01	3.049E+02
16.13.50	7.758E+01	7.030E+00	1.051E+01		2.498E+01	1.808E+01	3.079E+02
16.14.00	7.761E+01	9.235E+00	9.811E+00		2.499E+01	1.816E+01	3.043E+02
16.14.10	7.761E+01	9.360E+00	1.006E+01		2.503E+01	1.812E+01	3.116E+02
16.14.20	7.936E+01	6.364E+00	9.066E+00		2.515E+01	1.812E+01	3.055E+02
16.14.30	8.022E+01	4.908E+00	1.063E+01		2.514E+01	1.832E+01	3.024E+02
16.14.40	7.887E+01	6.656E+00	1.126E+01		2.519E+01	1.808E+01	3.110E+02
16.14.50	7.903E+01	7.779E+00	1.059E+01		2.526E+01	1.760E+01	3.012E+02
16.15.00	8.012E+01	7.696E+00	1.258E+01		2.520E+01	1.740E+01	3.116E+02
16.15.10	7.966E+01	8.819E+00	1.121E+01		2.519E+01	1.764E+01	3.073E+02
16.15.20	8.134E+01	1.106E+01	1.204E+01		2.515E+01	1.804E+01	3.110E+02
16.15.30	8.068E+01	8.112E+00	1.167E+01		2.516E+01	1.816E+01	3.061E+02
16.15.40	8.220E+01	8.902E+00	1.275E+01		2.509E+01	1.836E+01	3.104E+02
16.15.50	7.982E+01	7.904E+00	1.258E+01		2.508E+01	1.824E+01	3.079E+02
16.16.00	8.236E+01	9.401E+00	1.237E+01		2.504E+01	1.804E+01	3.092E+02
16.16.10	8.593E+01	1.002E+01	1.349E+01		2.510E+01	1.800E+01	3.122E+02
16.16.20	8.226E+01	8.278E+00	1.415E+01		2.510E+01	1.840E+01	3.110E+02
16.16.30	8.190E+01	8.278E+00	1.242E+01		2.512E+01	1.856E+01	3.153E+02
16.16.40	8.098E+01	7.820E+00	1.262E+01		2.517E+01	1.848E+01	3.073E+02
16.16.50	8.428E+01	8.486E+00	1.370E+01		2.506E+01	1.848E+01	3.128E+02
16.17.00	8.477E+01	8.860E+00	1.374E+01		2.505E+01	1.860E+01	3.104E+02
16.17.10	8.434E+01	9.900E+00	1.399E+01		2.506E+01	1.860E+01	3.122E+02
16.17.20	8.563E+01	7.612E+00	1.308E+01		2.512E+01	1.888E+01	3.128E+02
16.17.30	8.335E+01	9.776E+00	1.494E+01		2.531E+01	1.784E+01	3.061E+02
16.17.40	8.560E+01	8.694E+00	1.486E+01		2.528E+01	1.856E+01	3.141E+02
16.17.50	8.236E+01	6.448E+00	1.457E+01		2.523E+01	1.860E+01	3.049E+02
16.18.00	8.484E+01	7.030E+00	1.424E+01		2.521E+01	1.820E+01	3.092E+02
16.18.10	8.550E+01	8.153E+00	1.577E+01		2.527E+01	1.792E+01	3.079E+02
16.18.20	8.556E+01	7.404E+00	1.635E+01		2.531E+01	1.832E+01	3.116E+02
16.18.30	8.543E+01	7.404E+00	1.672E+01		2.544E+01	1.848E+01	3.098E+02
16.18.40	8.636E+01	1.098E+01	1.631E+01		2.547E+01	1.844E+01	3.079E+02
16.18.50	8.589E+01	1.027E+01	1.515E+01		2.547E+01	1.832E+01	3.098E+02
16.19.00	8.596E+01	9.318E+00	1.506E+01		2.543E+01	1.844E+01	3.031E+02
16.19.10	8.388E+01	1.052E+01	1.627E+01		2.533E+01	1.820E+01	3.055E+02
16.19.20	8.372E+01	7.904E+00	1.788E+01		2.533E+01	1.736E+01	3.055E+02
16.19.30	8.880E+01	7.654E+00	1.879E+01		2.519E+01	1.804E+01	3.110E+02
16.19.40	8.801E+01	8.403E+00	1.900E+01		2.521E+01	1.812E+01	3.086E+02
16.19.50	8.745E+01	9.276E+00	1.805E+01		2.521E+01	1.788E+01	3.067E+02
16.20.00	8.837E+01	7.737E+00	1.738E+01		2.516E+01	1.776E+01	3.079E+02
16.20.10	9.309E+01	1.010E+01	1.734E+01		2.497E+01	1.812E+01	3.104E+02
16.20.20	9.207E+01	9.027E+00	1.581E+01		2.496E+01	1.864E+01	3.147E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B2.- Continued

(c) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
16.20.30	9.075E+01	9.152E+00	1.378E+01		2.494E+01	1.832E+01	3.079E+02
16.20.40	8.923E+01	7.321E+00	1.527E+01		2.496E+01	1.800E+01	3.122E+02
16.20.50	9.121E+01	7.654E+00	1.490E+01		2.503E+01	1.792E+01	3.079E+02
16.21.00	9.048E+01	9.276E+00	1.457E+01		2.491E+01	1.848E+01	3.116E+02
16.21.10	9.015E+01	9.193E+00	1.399E+01		2.498E+01	1.872E+01	3.104E+02
16.21.20	9.091E+01	9.734E+00	1.502E+01		2.502E+01	1.876E+01	3.122E+02
16.21.30	8.741E+01	1.052E+01	1.519E+01		2.499E+01	1.880E+01	3.037E+02
16.21.40	8.319E+01	8.403E+00	1.552E+01		2.494E+01	1.864E+01	3.092E+02
16.21.50	8.127E+01	8.112E+00	1.531E+01		2.490E+01	1.900E+01	3.104E+02
16.22.00	7.774E+01	1.019E+01	1.453E+01		2.489E+01	1.872E+01	3.098E+02
16.22.10	7.873E+01	1.189E+01	1.449E+01		2.496E+01	1.824E+01	3.073E+02
16.22.20	7.953E+01	7.072E+00	1.258E+01		2.497E+01	1.832E+01	3.110E+02
16.22.30	7.712E+01	8.153E+00	1.192E+01		2.512E+01	1.832E+01	3.104E+02
16.22.40	8.048E+01	8.361E+00	1.142E+01		2.522E+01	1.832E+01	3.079E+02
16.22.50	7.870E+01	8.028E+00	1.196E+01		2.526E+01	1.752E+01	3.031E+02
16.23.00	7.867E+01	8.444E+00	1.159E+01		2.511E+01	1.744E+01	3.104E+02
16.23.10	7.933E+01	7.696E+00	1.109E+01		2.502E+01	1.828E+01	3.092E+02
16.23.20	8.325E+01	9.193E+00	1.076E+01		2.508E+01	1.828E+01	3.116E+02
16.23.30	7.969E+01	8.153E+00	1.138E+01		2.531E+01	1.880E+01	3.073E+02
16.23.40	7.880E+01	1.019E+01	1.150E+01		2.525E+01	1.860E+01	3.055E+02
16.23.50	8.068E+01	1.110E+01	1.341E+01		2.519E+01	1.840E+01	3.031E+02
16.24.00	7.692E+01	1.006E+01	1.184E+01		2.499E+01	1.860E+01	3.116E+02
16.24.10	7.877E+01	8.153E+00	1.179E+01		2.495E+01	1.848E+01	3.067E+02
16.24.20	8.071E+01	8.528E+00	1.242E+01		2.487E+01	1.816E+01	3.110E+02
16.24.30	8.134E+01	8.112E+00	1.126E+01		2.481E+01	1.860E+01	3.141E+02
16.24.40	7.916E+01	7.820E+00	1.192E+01		2.490E+01	1.848E+01	3.061E+02
16.24.50	7.613E+01	6.697E+00	1.088E+01		2.478E+01	1.872E+01	3.165E+02
16.25.00	7.586E+01	6.656E+00	1.142E+01		2.496E+01	1.828E+01	3.073E+02
16.25.10	7.741E+01	7.904E+00	1.043E+01		2.498E+01	1.816E+01	3.086E+02
16.25.20	7.583E+01	8.902E+00	9.232E+00		2.490E+01	1.812E+01	3.110E+02
16.25.30	7.784E+01	1.035E+01	1.059E+01		2.491E+01	1.828E+01	3.092E+02
16.25.40	7.827E+01	8.195E+00	1.250E+01		2.488E+01	1.836E+01	3.098E+02
16.25.50	7.649E+01	8.902E+00	1.101E+01		2.494E+01	1.808E+01	3.116E+02
16.26.00	7.682E+01	8.528E+00	1.109E+01		2.495E+01	1.784E+01	3.098E+02
16.26.10	7.731E+01	8.278E+00	1.246E+01		2.498E+01	1.732E+01	3.092E+02
16.26.20	7.748E+01	7.529E+00	1.291E+01		2.486E+01	1.808E+01	3.122E+02
16.26.30	7.741E+01	8.361E+00	1.204E+01		2.492E+01	1.788E+01	3.073E+02
16.26.40	7.441E+01	1.085E+01	1.167E+01		2.485E+01	1.804E+01	3.134E+02
16.26.50	7.619E+01	9.318E+00	1.030E+01		2.478E+01	1.832E+01	3.104E+02
16.27.00	7.537E+01	8.611E+00	9.439E+00		2.487E+01	1.792E+01	3.110E+02
16.27.10	7.362E+01	1.064E+01	9.811E+00		2.488E+01	1.748E+01	3.104E+02
16.27.20	7.613E+01	8.777E+00	1.055E+01		2.491E+01	1.764E+01	3.116E+02
16.27.30	7.642E+01	8.403E+00	9.729E+00		2.502E+01	1.764E+01	3.104E+02
16.27.40	7.745E+01	7.862E+00	1.068E+01		2.507E+01	1.760E+01	3.086E+02
16.27.50	7.659E+01	9.193E+00	1.026E+01		2.502E+01	1.808E+01	3.116E+02
16.28.00	7.533E+01	8.694E+00	1.117E+01		2.517E+01	1.848E+01	3.092E+02
16.28.10	7.626E+01	8.611E+00	1.150E+01		2.506E+01	1.844E+01	3.067E+02
16.28.20	7.738E+01	7.529E+00	1.097E+01		2.497E+01	1.776E+01	3.049E+02
16.28.30	7.398E+01	7.113E+00	1.167E+01		2.492E+01	1.752E+01	3.086E+02
16.28.40	7.543E+01	9.900E+00	1.113E+01		2.497E+01	1.780E+01	3.061E+02
16.28.50	7.629E+01	9.443E+00	1.113E+01		2.496E+01	1.780E+01	3.092E+02
16.29.00	7.725E+01	9.984E+00	1.184E+01		2.490E+01	1.812E+01	3.067E+02
16.29.10	7.623E+01	8.361E+00	1.184E+01		2.481E+01	1.812E+01	3.086E+02
16.29.20	7.385E+01	7.612E+00	1.250E+01		2.470E+01	1.864E+01	3.098E+02
16.29.30	7.253E+01	7.696E+00	1.225E+01		2.499E+01	1.804E+01	3.171E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B2.- Continued

(d) Leg A → E

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
17.31.40	7.939E+01	1.144E+01	1.320E+01	1.701E+00	2.531E+01	1.788E+01	3.299E+02
17.31.50	7.745E+01	1.164E+01	1.279E+01	1.623E+00	2.553E+01	1.816E+01	3.183E+02
17.32.00	7.755E+01	1.015E+01	1.304E+01	1.680E+00	2.549E+01	1.800E+01	3.177E+02
17.32.10	7.425E+01	1.052E+01	1.432E+01	1.602E+00	2.545E+01	1.804E+01	3.220E+02
17.32.20	7.586E+01	9.984E+00	1.312E+01	1.684E+00	2.558E+01	1.796E+01	3.196E+02
17.32.30	7.398E+01	1.094E+01	1.109E+01	1.715E+00	2.554E+01	1.800E+01	3.177E+02
17.32.40	7.131E+01	1.094E+01	1.179E+01	1.708E+00	2.557E+01	1.788E+01	3.196E+02
17.32.50	6.996E+01	9.859E+00	1.167E+01	1.716E+00	2.558E+01	1.844E+01	3.220E+02
17.33.00	6.857E+01	9.609E+00	1.130E+01	1.716E+00	2.583E+01	1.812E+01	3.214E+02
17.33.10	7.002E+01	1.223E+01	1.242E+01	1.595E+00	2.593E+01	1.812E+01	3.159E+02
17.33.20	6.774E+01	1.094E+01	1.167E+01	1.608E+00	2.583E+01	1.816E+01	3.153E+02
17.33.30	6.887E+01	1.006E+01	1.101E+01	1.668E+00	2.593E+01	1.716E+01	3.208E+02
17.33.40	7.078E+01	7.696E+00	1.121E+01	1.526E+00	2.598E+01	1.740E+01	3.177E+02
17.33.50	7.266E+01	9.152E+00	1.126E+01	1.505E+00	2.595E+01	1.764E+01	3.226E+02
17.34.00	7.081E+01	1.168E+01	1.242E+01	1.723E+00	2.599E+01	1.756E+01	3.214E+02
17.34.10	7.187E+01	9.651E+00	1.262E+01	1.635E+00	2.604E+01	1.732E+01	3.171E+02
17.34.20	7.154E+01	9.318E+00	1.059E+01	1.595E+00	2.602E+01	1.692E+01	3.208E+02
17.34.30	7.223E+01	1.223E+01	1.204E+01	1.506E+00	2.589E+01	1.752E+01	3.244E+02
17.34.40	7.312E+01	1.098E+01	1.229E+01	1.567E+00	2.590E+01	1.760E+01	3.159E+02
17.34.50	7.223E+01	1.081E+01	1.101E+01	1.473E+00	2.589E+01	1.744E+01	3.238E+02
17.35.00	7.332E+01	8.944E+00	1.146E+01	1.645E+00	2.603E+01	1.740E+01	3.238E+02
17.35.10	7.316E+01	9.235E+00	1.179E+01	1.579E+00	2.607E+01	1.732E+01	3.189E+02
17.35.20	6.989E+01	1.094E+01	1.246E+01	1.518E+00	2.614E+01	1.740E+01	3.183E+02
17.35.30	7.368E+01	9.734E+00	1.084E+01	1.667E+00	2.591E+01	1.772E+01	3.244E+02
17.35.40	7.434E+01	9.942E+00	1.030E+01	1.609E+00	2.593E+01	1.764E+01	3.165E+02
17.35.50	7.322E+01	1.119E+01	9.853E+00	1.559E+00	2.580E+01	1.760E+01	3.208E+02
17.36.00	7.441E+01	1.081E+01	9.480E+00	1.614E+00	2.567E+01	1.780E+01	3.208E+02
17.36.10	7.504E+01	1.089E+01	1.105E+01	1.639E+00	2.569E+01	1.816E+01	3.287E+02
17.36.20	7.319E+01	9.360E+00	1.063E+01	1.788E+00	2.577E+01	1.784E+01	3.208E+02
17.36.30	7.309E+01	9.110E+00	1.010E+01	1.703E+00	2.576E+01	1.792E+01	3.226E+02
17.36.40	7.269E+01	9.235E+00	1.092E+01	1.730E+00	2.584E+01	1.792E+01	3.251E+02
17.36.50	7.035E+01	1.060E+01	1.126E+01	1.743E+00	2.590E+01	1.792E+01	3.214E+02
17.37.00	7.124E+01	1.123E+01	7.824E+00	1.638E+00	2.591E+01	1.780E+01	3.171E+02
17.37.10	7.434E+01	1.019E+01	9.190E+00	1.633E+00	2.573E+01	1.808E+01	3.281E+02
17.37.20	7.362E+01	1.285E+01	9.853E+00	1.912E+00	2.583E+01	1.796E+01	3.183E+02
17.37.30	7.474E+01	9.068E+00	1.001E+01	1.779E+00	2.575E+01	1.792E+01	3.238E+02
17.37.40	7.543E+01	9.360E+00	1.121E+01	1.861E+00	2.569E+01	1.768E+01	3.202E+02
17.37.50	7.616E+01	8.403E+00	1.105E+01	1.683E+00	2.559E+01	1.792E+01	3.263E+02
17.38.00	7.649E+01	8.652E+00	1.006E+01	1.864E+00	2.583E+01	1.776E+01	3.263E+02
17.38.10	7.923E+01	8.694E+00	1.126E+01	1.678E+00	2.591E+01	1.752E+01	3.159E+02
17.38.20	8.088E+01	8.528E+00	1.204E+01	1.753E+00	2.578E+01	1.780E+01	3.263E+02
17.38.30	7.989E+01	7.404E+00	1.254E+01	1.942E+00	2.584E+01	1.748E+01	3.220E+02
17.38.40	7.642E+01	7.862E+00	1.159E+01	1.794E+00	2.583E+01	1.760E+01	3.238E+02
17.38.50	7.613E+01	8.694E+00	1.130E+01	1.980E+00	2.584E+01	1.712E+01	3.220E+02
17.39.00	7.296E+01	8.486E+00	1.200E+01	1.881E+00	2.586E+01	1.776E+01	3.208E+02
17.39.10	6.900E+01	8.112E+00	1.308E+01	1.924E+00	2.555E+01	1.800E+01	3.281E+02
17.39.20	7.359E+01	7.779E+00	1.287E+01	2.306E+00	2.561E+01	1.680E+01	3.232E+02
17.39.30	7.164E+01	1.006E+01	1.291E+01	2.225E+00	2.561E+01	1.800E+01	3.214E+02
17.39.40	7.095E+01	1.102E+01	1.374E+01	1.991E+00	2.546E+01	1.780E+01	3.214E+02
17.39.50	7.210E+01	9.110E+00	1.196E+01	2.000E+00	2.524E+01	1.616E+01	3.251E+02

APPENDIX B

TABLE B2.- Continued

(d) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
17.40.00	7.207E+01	8.652E+00	1.171E+01	2.156E+00	2.517E+01	1.752E+01	3.226E+02
17.40.10	7.223E+01	7.404E+00	1.159E+01	2.018E+00	2.508E+01	1.764E+01	3.257E+02
17.40.20	7.266E+01	9.110E+00	1.175E+01	1.959E+00	2.519E+01	1.740E+01	3.238E+02
17.40.30	7.368E+01	9.859E+00	1.146E+01	2.066E+00	2.524E+01	1.680E+01	3.275E+02
17.40.40	7.349E+01	7.113E+00	1.063E+01	2.026E+00	2.539E+01	1.700E+01	3.220E+02
17.40.50	7.263E+01	1.015E+01	1.233E+01	1.955E+00	2.561E+01	1.696E+01	3.263E+02
17.41.00	7.451E+01	8.236E+00	1.233E+01	2.132E+00	2.555E+01	1.704E+01	3.220E+02
17.41.10	8.226E+01	1.027E+01	1.130E+01	1.951E+00	2.551E+01	1.780E+01	3.226E+02
17.41.20	7.893E+01	9.484E+00	1.113E+01	2.328E+00	2.548E+01	1.800E+01	3.244E+02
17.41.30	7.995E+01	1.010E+01	1.221E+01	2.021E+00	2.553E+01	1.820E+01	3.238E+02
17.41.40	8.236E+01	8.153E+00	1.428E+01	2.137E+00	2.567E+01	1.796E+01	3.238E+02
17.41.50	7.771E+01	8.528E+00	1.333E+01	2.340E+00	2.567E+01	1.788E+01	3.208E+02
17.42.00	8.197E+01	8.611E+00	1.175E+01	2.026E+00	2.575E+01	1.656E+01	3.177E+02
17.42.10	7.972E+01	9.152E+00	1.109E+01	1.985E+00	2.574E+01	1.416E+01	3.275E+02
17.42.20	7.781E+01	9.027E+00	1.055E+01	2.418E+00	2.568E+01	1.648E+01	3.244E+02
17.42.30	7.863E+01	7.779E+00	1.030E+01	2.124E+00	2.572E+01	1.448E+01	3.269E+02
17.42.40	7.771E+01	8.694E+00	1.142E+01		2.572E+01	1.012E+01	3.269E+02
17.42.50	7.566E+01	8.236E+00	1.386E+01		2.564E+01	1.040E+01	3.324E+02
17.43.00	7.811E+01	9.609E+00	1.486E+01		2.579E+01	1.728E+01	3.263E+02
17.43.10	7.510E+01	8.902E+00	1.424E+01	2.455E+00	2.583E+01	1.748E+01	3.251E+02
17.43.20	7.448E+01	7.030E+00	1.316E+01	2.124E+00	2.582E+01	1.708E+01	3.238E+02
17.43.30	7.586E+01	6.988E+00	1.109E+01	2.531E+00	2.571E+01	1.648E+01	3.244E+02
17.43.40	7.830E+01	6.739E+00	1.018E+01	2.394E+00	2.579E+01	1.820E+01	3.244E+02
17.43.50	7.903E+01	8.819E+00	1.134E+01	2.547E+00	2.584E+01	1.796E+01	3.214E+02
17.44.00	7.910E+01	8.278E+00	1.283E+01	2.430E+00	2.564E+01	1.844E+01	3.214E+02
17.44.10	7.953E+01	1.023E+01	1.328E+01	2.551E+00	2.532E+01	1.896E+01	3.232E+02
17.44.20	8.184E+01	9.900E+00	1.333E+01	2.467E+00	2.544E+01	1.844E+01	3.177E+02
17.44.30	8.510E+01	9.526E+00	1.320E+01	2.194E+00	2.521E+01	1.836E+01	3.257E+02
17.44.40	7.867E+01	8.528E+00	1.411E+01	2.368E+00	2.521E+01	1.816E+01	3.244E+02
17.44.50	8.368E+01	7.571E+00	1.457E+01	2.200E+00	2.504E+01	1.832E+01	3.232E+02
17.45.00	8.154E+01	8.444E+00	1.341E+01	2.066E+00	2.492E+01	1.824E+01	3.257E+02
17.45.10	7.936E+01	1.006E+01	1.192E+01	2.248E+00	2.492E+01	1.816E+01	3.263E+02
17.45.20	8.009E+01	8.611E+00	1.279E+01	2.210E+00	2.480E+01	1.816E+01	3.263E+02
17.45.30	8.259E+01	7.280E+00	1.341E+01	2.343E+00	2.473E+01	1.804E+01	3.257E+02
17.45.40	8.296E+01	7.238E+00	1.171E+01	2.268E+00	2.467E+01	1.800E+01	3.244E+02
17.45.50	8.362E+01	9.526E+00	1.337E+01	2.317E+00	2.477E+01	1.768E+01	3.269E+02
17.46.00	8.276E+01	9.609E+00	1.395E+01	2.302E+00	2.474E+01	1.764E+01	3.263E+02
17.46.10	8.289E+01	8.569E+00	1.192E+01	2.220E+00	2.463E+01	1.780E+01	3.269E+02
17.46.20	8.451E+01	9.235E+00	1.146E+01	2.402E+00	2.456E+01	1.796E+01	3.275E+02
17.46.30	8.421E+01	8.320E+00	1.097E+01	2.307E+00	2.467E+01	1.784E+01	3.263E+02
17.46.40	8.543E+01	8.736E+00	1.130E+01	2.486E+00	2.482E+01	1.768E+01	3.232E+02
17.46.50	8.543E+01	9.152E+00	1.196E+01	2.315E+00	2.461E+01	1.764E+01	3.257E+02
17.47.00	8.778E+01	8.153E+00	1.229E+01	2.051E+00	2.476E+01	1.752E+01	3.238E+02
17.47.10	8.349E+01	9.900E+00	1.126E+01	2.067E+00	2.472E+01	1.744E+01	3.275E+02
17.47.20	8.682E+01	8.944E+00	1.109E+01	2.347E+00	2.476E+01	1.736E+01	3.275E+02
17.47.30	8.725E+01	8.569E+00	9.356E+00	2.329E+00	2.480E+01	1.736E+01	3.257E+02
17.47.40	8.784E+01	7.654E+00	8.155E+00	2.254E+00	2.480E+01	1.744E+01	3.275E+02
17.47.50	8.108E+01	8.320E+00	7.700E+00	2.377E+00	2.481E+01	1.752E+01	3.251E+02
17.48.00	8.490E+01	9.443E+00	7.659E+00	2.342E+00	2.474E+01	1.736E+01	3.269E+02
17.48.10	8.646E+01	9.152E+00	8.073E+00	2.392E+00	2.475E+01	1.744E+01	3.275E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B2.- Continued

(d) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
17.48.20	8.444E+01	9.027E+00	9.190E+00	2.328E+00	2.483E+01	1.712E+01	3.269E+02
17.48.30	8.316E+01	9.651E+00	1.043E+01	2.320E+00	2.481E+01	1.704E+01	3.299E+02
17.48.40	8.563E+01	9.152E+00	1.126E+01	2.311E+00	2.497E+01	1.700E+01	3.220E+02
17.48.50	8.603E+01	1.060E+01	1.022E+01	2.249E+00	2.495E+01	1.736E+01	3.263E+02
17.49.00	8.372E+01	8.361E+00	1.039E+01	2.769E+00	2.503E+01	1.724E+01	3.306E+02
17.49.10	8.184E+01	8.985E+00	9.977E+00	2.399E+00	2.536E+01	1.620E+01	3.202E+02
17.49.20	7.834E+01	8.112E+00	1.026E+01	2.317E+00	2.530E+01	1.576E+01	3.275E+02
17.49.30	8.319E+01	6.364E+00	1.084E+01	2.777E+00	2.527E+01	1.860E+01	3.244E+02
17.49.40	8.840E+01	8.860E+00	1.225E+01	2.237E+00	2.492E+01	1.864E+01	3.196E+02
17.49.50	8.797E+01	5.865E+00	1.424E+01	2.508E+00	2.463E+01	1.916E+01	3.257E+02
17.50.00	8.807E+01	8.195E+00	1.382E+01	2.651E+00	2.456E+01	1.900E+01	3.232E+02
17.50.10	8.751E+01	8.902E+00	1.299E+01	2.500E+00	2.448E+01	1.904E+01	3.226E+02
17.50.20	8.820E+01	7.737E+00	1.171E+01	2.603E+00	2.453E+01	1.896E+01	3.232E+02
17.50.30	8.811E+01	8.403E+00	1.287E+01	2.508E+00	2.450E+01	1.880E+01	3.232E+02
17.50.40	8.867E+01	8.819E+00	1.407E+01	2.529E+00	2.426E+01	1.912E+01	3.257E+02
17.50.50	9.018E+01	7.945E+00	1.378E+01	2.682E+00	2.440E+01	1.896E+01	3.238E+02
17.51.00	8.906E+01	7.862E+00	1.337E+01	2.644E+00	2.438E+01	1.760E+01	3.232E+02
17.51.10	9.124E+01	7.321E+00	1.246E+01		2.427E+01	1.744E+01	3.263E+02
17.51.20	8.814E+01	7.321E+00	1.184E+01		2.431E+01	1.444E+01	3.263E+02
17.51.30	9.091E+01	5.200E+00	1.275E+01		2.434E+01	1.468E+01	3.263E+02
17.51.40	9.200E+01	7.280E+00	1.229E+01		2.391E+01	1.788E+01	3.226E+02
17.51.50	9.550E+01	7.488E+00	1.299E+01	2.887E+00	2.404E+01	1.892E+01	3.238E+02
17.52.00	9.586E+01	7.571E+00	1.432E+01	2.820E+00	2.367E+01	1.928E+01	3.238E+02
17.52.10	1.008E+02	8.403E+00	1.374E+01	2.833E+00	2.349E+01	1.948E+01	3.232E+02
17.52.20	1.023E+02	7.072E+00	1.449E+01	2.845E+00	2.344E+01	1.944E+01	3.238E+02
17.52.30	1.028E+02	7.696E+00	1.295E+01	2.793E+00	2.347E+01	1.868E+01	3.238E+02
17.52.40	1.092E+02	9.484E+00	1.308E+01	2.754E+00	2.337E+01	1.856E+01	3.238E+02
17.52.50	1.124E+02	1.027E+01	1.461E+01	2.790E+00	2.320E+01	1.852E+01	3.251E+02
17.53.00	1.134E+02	8.860E+00	1.569E+01	2.805E+00	2.305E+01	1.860E+01	3.251E+02
17.53.10	1.139E+02	8.486E+00	1.453E+01	2.864E+00	2.293E+01	1.868E+01	3.257E+02
17.53.20	1.125E+02	8.403E+00	1.353E+01	2.825E+00	2.280E+01	1.888E+01	3.232E+02
17.53.30	1.100E+02	8.236E+00	1.477E+01	2.724E+00	2.278E+01	1.896E+01	3.238E+02
17.53.40	1.172E+02	6.614E+00	1.424E+01	2.664E+00	2.291E+01	1.876E+01	3.238E+02
17.53.50	1.225E+02	8.694E+00	1.635E+01	2.571E+00	2.300E+01	1.852E+01	3.232E+02
17.54.00	1.267E+02	1.023E+01	1.519E+01	2.530E+00	2.305E+01	1.800E+01	3.257E+02
17.54.10	1.212E+02	9.318E+00	1.407E+01	2.700E+00	2.298E+01	1.784E+01	3.244E+02
17.54.20	1.180E+02	1.114E+01	1.444E+01	2.440E+00	2.274E+01	1.828E+01	3.257E+02
17.54.30	1.156E+02	1.148E+01	1.676E+01	2.695E+00	2.273E+01	1.816E+01	3.257E+02
17.54.40	1.221E+02	1.027E+01	1.651E+01	2.595E+00	2.271E+01	1.800E+01	3.263E+02
17.54.50	1.216E+02	7.779E+00	1.585E+01	2.837E+00	2.266E+01	1.856E+01	3.251E+02
17.55.00	1.258E+02	6.947E+00	1.453E+01	2.741E+00	2.272E+01	1.820E+01	3.238E+02
17.55.10	1.250E+02	7.820E+00	1.304E+01	2.451E+00	2.272E+01	1.820E+01	3.244E+02
17.55.20	1.260E+02	1.035E+01	1.163E+01	2.427E+00	2.281E+01	1.792E+01	3.232E+02
17.55.30	1.237E+02	8.902E+00	1.295E+01	2.593E+00	2.265E+01	1.844E+01	3.244E+02
17.55.40	1.267E+02	9.609E+00	1.295E+01	2.742E+00	2.255E+01	1.888E+01	3.257E+02
17.55.50	1.300E+02	1.052E+01	1.411E+01	2.659E+00	2.261E+01	1.852E+01	3.232E+02
17.56.00	1.251E+02	9.110E+00	1.453E+01	2.416E+00	2.284E+01	1.760E+01	3.251E+02
17.56.10	1.187E+02	7.321E+00	1.432E+01	2.328E+00	2.296E+01	1.712E+01	3.244E+02
17.56.20	1.193E+02	9.318E+00	1.362E+01	2.269E+00	2.275E+01	1.808E+01	3.232E+02
17.56.30	1.267E+02	7.862E+00	1.341E+01	2.489E+00	2.259E+01	1.864E+01	3.238E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B2.- Continued

(d) Continued

zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
17.56.40	1.318E+02	1.002E+01	1.411E+01	2.714E+00	2.258E+01	1.868E+01	3.244E+02
17.56.50	1.274E+02	9.401E+00	1.498E+01	2.617E+00	2.260E+01	1.852E+01	3.251E+02
17.57.00	1.281E+02	7.321E+00	1.544E+01	2.439E+00	2.288E+01	1.768E+01	3.232E+02
17.57.10	1.191E+02	8.985E+00	1.610E+01	2.531E+00	2.317E+01	1.704E+01	3.232E+02
17.57.20	1.173E+02	8.694E+00	1.556E+01	2.538E+00	2.328E+01	1.676E+01	3.226E+02
17.57.30	1.137E+02	9.027E+00	1.453E+01	2.597E+00	2.313E+01	1.760E+01	3.220E+02
17.57.40	1.209E+02	8.777E+00	1.320E+01	2.152E+00	2.326E+01	1.696E+01	3.214E+02
17.57.50	1.160E+02	7.737E+00	1.386E+01	2.193E+00	2.312E+01	1.724E+01	3.244E+02
17.58.00	1.149E+02	7.862E+00	1.291E+01	2.036E+00	2.292E+01	1.740E+01	3.238E+02
17.58.10	1.192E+02	9.859E+00	1.316E+01	2.223E+00	2.281E+01	1.800E+01	3.238E+02
17.58.20	1.291E+02	1.135E+01	1.266E+01	2.459E+00	2.265E+01	1.852E+01	3.238E+02
17.58.30	1.362E+02	9.235E+00	1.395E+01	2.526E+00	2.252E+01	1.864E+01	3.244E+02
17.58.40	1.310E+02	6.531E+00	1.461E+01	3.018E+00	2.250E+01	1.732E+01	3.232E+02
17.58.50	1.328E+02	7.820E+00	1.548E+01	2.461E+00	2.262E+01	1.820E+01	3.251E+02
17.59.00	1.267E+02	9.318E+00	1.672E+01	2.199E+00	2.302E+01	1.764E+01	3.244E+02
17.59.10	1.167E+02	9.776E+00	1.631E+01	2.153E+00	2.300E+01	1.828E+01	3.238E+02
17.59.20	1.199E+02	9.484E+00	1.370E+01	1.944E+00	2.320E+01	1.720E+01	3.238E+02
17.59.30	1.159E+02	9.193E+00	1.432E+01	2.069E+00	2.340E+01	1.648E+01	3.263E+02
17.59.40	1.099E+02	8.569E+00	1.461E+01	2.088E+00	2.332E+01	1.640E+01	3.263E+02
17.59.50	1.120E+02	9.817E+00	1.515E+01	2.117E+00	2.298E+01	1.796E+01	3.244E+02
18.00.00	1.211E+02	7.862E+00	1.577E+01	2.015E+00	2.339E+01	1.644E+01	3.275E+02
18.00.10	1.060E+02	8.694E+00	1.639E+01	2.028E+00	2.376E+01	1.524E+01	3.269E+02
18.00.20	9.761E+01	8.528E+00	1.465E+01	1.911E+00	2.405E+01	1.476E+01	3.257E+02
18.00.30	8.926E+01	8.236E+00	1.304E+01	1.751E+00	2.410E+01	1.476E+01	3.257E+02
18.00.40	9.164E+01	9.568E+00	1.159E+01	1.836E+00	2.375E+01	1.592E+01	3.275E+02
18.00.50	1.020E+02	8.153E+00	1.105E+01	1.877E+00	2.381E+01	1.564E+01	3.263E+02
18.01.00	9.791E+01	7.363E+00	1.068E+01	1.840E+00	2.373E+01	1.612E+01	3.257E+02
18.01.10	1.065E+02	8.070E+00	1.142E+01	1.809E+00	2.370E+01	1.648E+01	3.232E+02
18.01.20	1.056E+02	7.363E+00	1.076E+01	1.772E+00	2.357E+01	1.680E+01	3.263E+02
18.01.30	1.071E+02	8.361E+00	9.936E+00	1.973E+00	2.365E+01	1.672E+01	3.220E+02
18.01.40	1.068E+02	1.002E+01	9.770E+00	2.160E+00	2.368E+01	1.676E+01	3.244E+02
18.01.50	1.093E+02	9.360E+00	8.611E+00	2.028E+00	2.363E+01	1.576E+01	3.232E+02
18.02.00	1.017E+02	7.820E+00	9.315E+00	1.717E+00	2.369E+01	1.512E+01	3.244E+02
18.02.10	9.741E+01	8.652E+00	9.811E+00	1.760E+00	2.344E+01	1.660E+01	3.226E+02
18.02.20	1.074E+02	8.860E+00	8.487E+00	1.895E+00	2.333E+01	1.704E+01	3.244E+02
18.02.30	1.099E+02	8.070E+00	9.025E+00	1.882E+00	2.328E+01	1.776E+01	3.238E+02
18.02.40	1.120E+02	6.572E+00	1.130E+01	1.757E+00	2.314E+01	1.828E+01	3.232E+02
18.02.50	1.120E+02	7.571E+00	1.051E+01	1.831E+00	2.322E+01	1.824E+01	3.238E+02
18.03.00	1.146E+02	7.488E+00	9.563E+00	1.902E+00	2.335E+01	1.764E+01	3.220E+02
18.03.10	1.099E+02	1.035E+01	1.039E+01	1.770E+00	2.336E+01	1.732E+01	3.238E+02
18.03.20	1.074E+02	9.692E+00	1.163E+01	1.846E+00	2.327E+01	1.760E+01	3.257E+02
18.03.30	1.084E+02	8.569E+00	1.080E+01	1.622E+00	2.338E+01	1.820E+01	3.232E+02
18.03.40	1.124E+02	8.278E+00	1.188E+01	1.601E+00	2.350E+01	1.744E+01	3.232E+02
18.03.50	1.043E+02	6.780E+00	1.217E+01	1.536E+00	2.354E+01	1.724E+01	3.238E+02
18.04.00	1.084E+02	7.904E+00	1.440E+01	1.623E+00	2.348E+01	1.760E+01	3.244E+02
18.04.10	1.089E+02	9.193E+00	1.341E+01	1.681E+00	2.361E+01	1.720E+01	3.232E+02
18.04.20	1.047E+02	8.195E+00	1.233E+01	1.585E+00	2.353E+01	1.768E+01	3.226E+02
18.04.30	1.082E+02	8.985E+00	9.770E+00	1.685E+00	2.362E+01	1.740E+01	3.238E+02
18.04.40	1.044E+02	1.060E+01	1.092E+01	1.645E+00	2.347E+01	1.776E+01	3.251E+02
18.04.50	1.049E+02	9.360E+00	1.370E+01	1.673E+00	2.367E+01	1.724E+01	3.238E+02

APPENDIX B

TABLE B2.- Continued

(d) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
18.05.00	1.014E+02	9.609E+00	1.357E+01	1.690E+00	2.353E+01	1.784E+01	3.238E+02
18.05.10	1.058E+02	9.068E+00	1.490E+01	1.744E+00	2.337E+01	1.804E+01	3.275E+02
18.05.20	1.059E+02	9.859E+00	1.279E+01	1.715E+00	2.370E+01	1.760E+01	3.251E+02
18.05.30	1.021E+02	1.094E+01	1.121E+01	1.872E+00	2.371E+01	1.780E+01	3.244E+02
18.05.40	1.015E+02	1.002E+01	1.399E+01	1.729E+00	2.383E+01	1.792E+01	3.244E+02
18.05.50	1.022E+02	9.609E+00	1.560E+01	1.574E+00	2.361E+01	1.812E+01	3.263E+02
18.06.00	1.064E+02	8.528E+00	1.540E+01	1.652E+00	2.395E+01	1.784E+01	3.257E+02
18.06.10	1.009E+02	6.572E+00	1.382E+01	1.621E+00	2.413E+01	1.812E+01	3.244E+02
18.06.20	1.026E+02	7.280E+00	1.279E+01	1.864E+00	2.432E+01	1.740E+01	3.220E+02
18.06.30	9.834E+01	4.700E+00	1.200E+01	1.489E+00	2.438E+01	1.736E+01	3.232E+02
18.06.40	9.306E+01	5.075E+00	1.403E+01	1.504E+00	2.455E+01	1.776E+01	3.238E+02
18.06.50	9.570E+01	5.740E+00	1.163E+01	1.917E+00	2.458E+01	1.796E+01	3.244E+02
18.07.00	9.398E+01	7.820E+00	1.043E+01	1.903E+00	2.462E+01	1.736E+01	3.220E+02
18.07.10	9.596E+01	9.734E+00	1.167E+01	1.629E+00	2.465E+01	1.736E+01	3.189E+02
18.07.20	9.546E+01	7.987E+00	1.080E+01	1.545E+00	2.445E+01	1.800E+01	3.232E+02
18.07.30	9.309E+01	9.235E+00	1.188E+01	1.735E+00	2.452E+01	1.840E+01	3.244E+02
18.07.40	9.391E+01	9.193E+00	1.196E+01	1.798E+00	2.457E+01	1.804E+01	3.226E+02
18.07.50	9.121E+01	6.697E+00	1.080E+01	1.421E+00	2.461E+01	1.840E+01	3.214E+02
18.08.00	8.886E+01	9.526E+00	1.105E+01	1.798E+00	2.458E+01	1.864E+01	3.275E+02
18.08.10	9.038E+01	8.819E+00	1.092E+01	1.504E+00	2.461E+01	1.836E+01	3.183E+02
18.08.20	9.200E+01	9.110E+00	1.229E+01	1.401E+00	2.465E+01	1.840E+01	3.257E+02
18.08.30	8.834E+01	9.568E+00	1.171E+01	1.909E+00	2.472E+01	1.852E+01	3.232E+02
18.08.40	8.867E+01	8.777E+00	1.138E+01	1.553E+00	2.477E+01	1.808E+01	3.232E+02
18.08.50	8.679E+01	6.739E+00	1.138E+01	1.736E+00	2.485E+01	1.836E+01	3.244E+02
18.09.00	8.398E+01	7.030E+00	9.894E+00	1.660E+00	2.483E+01	1.832E+01	3.202E+02
18.09.10	8.286E+01	8.569E+00	9.894E+00	1.574E+00	2.479E+01	1.824E+01	3.238E+02
18.09.20	8.593E+01	1.040E+01	1.047E+01	1.861E+00	2.478E+01	1.828E+01	3.251E+02
18.09.30	8.669E+01	9.859E+00	1.312E+01	1.807E+00	2.491E+01	1.800E+01	3.232E+02
18.09.40	8.408E+01	9.318E+00	1.382E+01	1.607E+00	2.487E+01	1.780E+01	3.257E+02
18.09.50	8.325E+01	9.817E+00	1.523E+01	1.705E+00	2.491E+01	1.796E+01	3.251E+02
18.10.00	8.408E+01	1.064E+01	1.498E+01	1.777E+00	2.505E+01	1.808E+01	3.257E+02
18.10.10	8.431E+01	1.027E+01	1.237E+01	1.696E+00	2.515E+01	1.760E+01	3.208E+02
18.10.20	8.754E+01	8.569E+00	1.105E+01	1.432E+00	2.500E+01	1.772E+01	3.257E+02
18.10.30	8.507E+01	9.900E+00	1.262E+01	1.585E+00	2.505E+01	1.760E+01	3.214E+02
18.10.40	8.731E+01	9.900E+00	1.399E+01	1.757E+00	2.495E+01	1.788E+01	3.281E+02
18.10.50	8.811E+01	8.153E+00	1.362E+01	1.664E+00	2.489E+01	1.784E+01	3.220E+02
18.11.00	8.596E+01	7.820E+00	1.449E+01	1.427E+00	2.474E+01	1.792E+01	3.281E+02

APPENDIX B

TABLE B2.- Continued

(e) Spiral at WFC

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.14.50	7.144E+01	9.068E+00	1.138E+01		2.624E+01	1.988E+01	6.355E+01
18.15.00	6.933E+01	1.168E+01	1.001E+01		2.570E+01	1.976E+01	8.371E+01
18.15.10	7.071E+01	1.048E+01	8.280E+00		2.502E+01	1.976E+01	1.319E+02
18.15.20	6.774E+01	9.027E+00	7.990E+00		2.443E+01	1.948E+01	1.698E+02
18.15.30	7.137E+01	7.779E+00	8.694E+00		2.404E+01	1.940E+01	1.979E+02
18.15.40	6.873E+01	8.320E+00	9.397E+00		2.393E+01	1.912E+01	2.187E+02
18.15.50	7.227E+01	8.403E+00	8.073E+00		2.381E+01	1.892E+01	2.468E+02
18.16.00	7.246E+01	8.819E+00	7.783E+00		2.356E+01	1.868E+01	2.823E+02
18.16.10	7.669E+01	9.443E+00	8.445E+00		2.302E+01	1.844E+01	3.196E+02
18.16.20	7.543E+01	8.528E+00	8.031E+00		2.294E+01	1.848E+01	3.550E+02
18.16.30	7.580E+01	7.404E+00	8.197E+00		2.278E+01	1.852E+01	3.868E+02
18.16.40	7.672E+01	1.260E+01	1.014E+01		2.233E+01	1.844E+01	4.161E+02
18.16.50	7.289E+01	1.098E+01	1.072E+01		2.217E+01	1.836E+01	4.448E+02
18.17.00	7.425E+01	9.568E+00	1.084E+01		2.265E+01	1.812E+01	4.717E+02
18.17.10	7.962E+01	7.529E+00	1.035E+01		2.261E+01	1.796E+01	4.986E+02
18.17.20	7.692E+01	8.569E+00	9.563E+00		2.239E+01	1.796E+01	5.194E+02
18.17.30	7.309E+01	5.907E+00	1.030E+01		2.222E+01	1.780E+01	5.438E+02
18.17.40	7.642E+01	5.283E+00	1.171E+01		2.206E+01	1.768E+01	5.738E+02
18.17.50	7.755E+01	7.363E+00	1.088E+01		2.155E+01	1.804E+01	6.043E+02
18.18.00	7.474E+01	8.153E+00	8.031E+00		2.125E+01	1.808E+01	6.318E+02
18.18.10	7.491E+01	9.276E+00	8.776E+00		2.101E+01	1.792E+01	6.599E+02
18.18.20	7.626E+01	1.019E+01	1.063E+01		2.065E+01	1.780E+01	6.887E+02
18.18.30	7.669E+01	9.027E+00	1.130E+01		2.050E+01	1.772E+01	7.070E+02
18.18.40	7.906E+01	7.654E+00	1.362E+01		2.038E+01	1.744E+01	7.308E+02
18.18.50	7.946E+01	8.403E+00	1.341E+01		2.016E+01	1.676E+01	7.602E+02
18.19.00	7.702E+01	9.443E+00	1.279E+01		1.998E+01	1.636E+01	7.901E+02
18.19.10	7.887E+01	9.152E+00	1.192E+01		1.958E+01	1.692E+01	8.188E+02
18.19.20	7.570E+01	9.401E+00	1.155E+01		1.943E+01	1.672E+01	8.488E+02
18.19.30	7.735E+01	1.098E+01	1.246E+01		1.918E+01	1.696E+01	8.695E+02
18.19.40	7.764E+01	7.321E+00	1.121E+01		1.917E+01	1.604E+01	8.964E+02
18.19.50	7.731E+01	7.779E+00	9.977E+00		1.911E+01	1.548E+01	9.313E+02
18.20.00	7.504E+01	8.902E+00	1.018E+01		1.888E+01	1.552E+01	9.636E+02
18.20.10	7.263E+01	9.692E+00	1.130E+01		1.890E+01	1.500E+01	9.856E+02
18.20.20	7.401E+01	8.736E+00	1.063E+01		1.863E+01	1.504E+01	1.016E+03
18.20.30	7.401E+01	9.900E+00	9.729E+00		1.838E+01	1.484E+01	1.049E+03
18.20.40	7.464E+01	9.152E+00	8.652E+00		1.838E+01	1.432E+01	1.081E+03
18.20.50	7.048E+01	8.694E+00	9.273E+00		1.787E+01	1.468E+01	1.115E+03
18.21.00	7.177E+01	8.652E+00	1.076E+01		1.748E+01	1.476E+01	1.146E+03
18.21.10	7.177E+01	1.002E+01	1.101E+01		1.739E+01	1.444E+01	1.173E+03
18.21.20	7.065E+01	9.027E+00	1.134E+01		1.786E+01	1.328E+01	1.198E+03
18.21.30	6.939E+01	9.484E+00	1.097E+01		1.770E+01	1.316E+01	1.222E+03
18.21.40	6.883E+01	1.077E+01	9.770E+00		1.768E+01	1.268E+01	1.247E+03
18.21.50	6.893E+01	9.152E+00	1.088E+01		1.723E+01	1.300E+01	1.283E+03
18.22.00	6.771E+01	6.988E+00	1.105E+01		1.726E+01	1.204E+01	1.324E+03
18.22.10	6.530E+01	7.072E+00	1.184E+01		1.748E+01	1.096E+01	1.364E+03
18.22.20	6.454E+01	6.032E+00	1.117E+01		1.725E+01	1.072E+01	1.398E+03
18.22.30	6.339E+01	6.947E+00	1.039E+01		1.684E+01	1.084E+01	1.428E+03
18.22.40	6.487E+01	6.406E+00	9.729E+00		1.632E+01	1.148E+01	1.455E+03
18.22.50	6.451E+01	9.900E+00	1.001E+01		1.576E+01	1.184E+01	1.484E+03
18.23.00	6.699E+01	1.019E+01	1.047E+01		1.533E+01	1.168E+01	1.509E+03
18.23.10	6.580E+01	1.035E+01	1.188E+01		1.529E+01	1.104E+01	1.533E+03
18.23.20	6.557E+01	9.776E+00	1.357E+01		1.506E+01	1.084E+01	1.568E+03
18.23.30	6.732E+01	9.360E+00	1.378E+01		1.507E+01	1.088E+01	1.557E+03
18.23.40	6.669E+01	9.068E+00	1.258E+01		1.558E+01	1.116E+01	1.498E+03

*No data due to instrument malfunction.

APPENDIX B

TABLE B2.- Continued

(f) WFC → L

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
18.30.00	9.480E+01	1.064E+01	1.424E+01	2.001E+00	2.483E+01	1.852E+01	3.244E+02
18.30.10	9.312E+01	8.070E+00	1.544E+01	1.977E+00	2.486E+01	1.864E+01	3.275E+02
18.30.20	9.513E+01	9.401E+00	1.490E+01	1.881E+00	2.486E+01	1.832E+01	3.232E+02
18.30.30	9.589E+01	1.152E+01	1.403E+01	1.780E+00	2.478E+01	1.896E+01	3.257E+02
18.30.40	9.081E+01	1.243E+01	1.527E+01	1.960E+00	2.430E+01	1.928E+01	3.196E+02
18.30.50	7.929E+01	1.119E+01	1.544E+01	1.929E+00	2.380E+01	1.948E+01	3.257E+02
18.31.00	7.500E+01	8.611E+00	1.449E+01	1.969E+00	2.390E+01	1.928E+01	3.202E+02
18.31.10	8.160E+01	9.900E+00	1.304E+01	1.911E+00	2.382E+01	1.936E+01	3.275E+02
18.31.20	7.992E+01	1.019E+01	1.159E+01	1.999E+00	2.416E+01	1.916E+01	3.251E+02
18.31.30	8.362E+01	8.278E+00	1.213E+01	2.056E+00	2.402E+01	1.904E+01	3.324E+02
18.31.40	8.702E+01	1.131E+01	1.324E+01	2.047E+00	2.390E+01	1.932E+01	3.287E+02
18.31.50	8.837E+01	9.152E+00	1.333E+01	2.106E+00	2.395E+01	1.928E+01	3.269E+02
18.32.00	8.985E+01	9.942E+00	1.374E+01	2.156E+00	2.348E+01	1.956E+01	3.293E+02
18.32.10	7.923E+01	1.035E+01	1.391E+01	2.036E+00	2.338E+01	1.956E+01	3.342E+02
18.32.20	7.494E+01	8.694E+00	1.291E+01	1.870E+00	2.379E+01	1.924E+01	3.306E+02
18.32.30	8.774E+01	9.110E+00	1.208E+01	2.073E+00	2.390E+01	1.908E+01	3.296E+02
18.32.40	9.150E+01	1.106E+01	9.687E+00	1.938E+00	2.401E+01	1.896E+01	3.287E+02
18.32.50	9.240E+01	1.015E+01	1.063E+01	1.898E+00	2.408E+01	1.928E+01	3.318E+02
18.33.00	9.306E+01	1.002E+01	1.217E+01	1.907E+00	2.408E+01	1.908E+01	3.263E+02
18.33.10	9.593E+01	8.444E+00	1.188E+01	1.891E+00	2.400E+01	1.896E+01	3.306E+02
18.33.20	9.457E+01	7.945E+00	1.242E+01	1.850E+00	2.413E+01	1.848E+01	3.287E+02
18.33.30	9.249E+01	8.444E+00	1.341E+01	1.981E+00	2.406E+01	1.868E+01	3.318E+02
18.33.40	9.586E+01	8.070E+00	1.444E+01	2.014E+00	2.416E+01	1.828E+01	3.263E+02
18.33.50	9.428E+01	1.110E+01	1.486E+01	2.001E+00	2.425E+01	1.852E+01	3.324E+02
18.34.00	9.177E+01	8.528E+00	1.349E+01	1.877E+00	2.422E+01	1.844E+01	3.257E+02
18.34.10	9.589E+01	7.862E+00	1.386E+01	1.990E+00	2.436E+01	1.820E+01	3.299E+02
18.34.20	9.438E+01	8.028E+00	1.287E+01	1.736E+00	2.431E+01	1.824E+01	3.281E+02
18.34.30	9.791E+01	6.323E+00	1.266E+01	1.926E+00	2.437E+01	1.796E+01	3.251E+02
18.34.40	9.540E+01	1.073E+01	1.556E+01	1.724E+00	2.386E+01	1.880E+01	3.281E+02
18.34.50	8.240E+01	1.002E+01	1.502E+01	1.704E+00	2.404E+01	1.864E+01	3.165E+02
18.35.00	8.464E+01	1.127E+01	1.283E+01	1.971E+00	2.421E+01	1.784E+01	3.220E+02
18.35.10	9.012E+01	8.611E+00	1.121E+01	1.886E+00	2.424E+01	1.780E+01	3.281E+02
18.35.20	9.055E+01	9.152E+00	9.977E+00	1.681E+00	2.426E+01	1.716E+01	3.299E+02
18.35.30	9.131E+01	1.376E+01	1.444E+01	1.783E+00	2.296E+01	1.956E+01	4.045E+02
18.35.40	8.844E+01	8.112E+00	1.001E+01	1.728E+00	2.444E+01	1.812E+01	3.251E+02
18.35.50	9.220E+01	1.027E+01	1.126E+01	1.717E+00	2.445E+01	1.788E+01	3.293E+02
18.36.00	9.273E+01	1.073E+01	1.171E+01	1.883E+00	2.451E+01	1.764E+01	3.244E+02
18.36.10	9.108E+01	1.069E+01	1.063E+01	1.666E+00	2.440E+01	1.756E+01	3.281E+02
18.36.20	9.022E+01	9.651E+00	1.146E+01	1.694E+00	2.432E+01	1.732E+01	3.306E+02
18.36.30	9.276E+01	1.023E+01	1.097E+01	1.593E+00	2.428E+01	1.740E+01	3.293E+02
18.36.40	9.504E+01	1.318E+01	1.304E+01	1.771E+00	2.377E+01	1.776E+01	3.281E+02
18.36.50	9.167E+01	1.152E+01	1.378E+01	1.751E+00	2.353E+01	1.820E+01	3.232E+02
18.37.00	8.613E+01	8.944E+00	1.308E+01	1.745E+00	2.390E+01	1.760E+01	3.293E+02
18.37.10	9.068E+01	9.651E+00	1.059E+01	1.798E+00	2.387E+01	1.772E+01	3.287E+02
18.37.20	8.982E+01	9.235E+00	1.047E+01	1.691E+00	2.389E+01	1.788E+01	3.293E+02
18.37.30	9.071E+01	1.052E+01	1.018E+01	1.691E+00	2.395E+01	1.804E+01	3.293E+02
18.37.40	9.147E+01	7.862E+00	1.047E+01	1.742E+00	2.390E+01	1.824E+01	3.269E+02
18.37.50	9.266E+01	8.361E+00	1.175E+01	1.675E+00	2.390E+01	1.812E+01	3.287E+02
18.38.00	9.051E+01	1.056E+01	1.337E+01	1.805E+00	2.408E+01	1.776E+01	3.293E+02
18.38.10	9.051E+01	9.734E+00	1.283E+01	1.836E+00	2.407E+01	1.780E+01	3.287E+02

APPENDIX B

TABLE B2.- Continued

(f) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.38.20	9.147E+01	1.015E+01	1.097E+01	1.836E+00	2.399E+01	1.772E+01	3.330E+02
18.38.30	9.358E+01	1.077E+01	1.184E+01	1.893E+00	2.392E+01	1.756E+01	3.312E+02
18.38.40	8.715E+01	1.185E+01	1.076E+01	1.718E+00	2.404E+01	1.756E+01	3.299E+02
18.38.50	9.058E+01	1.135E+01	1.055E+01	1.867E+00	2.407E+01	1.772E+01	3.312E+02
18.39.00	8.976E+01	1.094E+01	9.770E+00	1.902E+00	2.388E+01	1.804E+01	3.336E+02
18.39.10	9.507E+01	1.027E+01	9.729E+00	1.749E+00	2.386E+01	1.788E+01	3.324E+02
18.39.20	9.540E+01	6.448E+00	1.006E+01	1.661E+00	2.373E+01	1.772E+01	3.318E+02
18.39.30	9.154E+01	7.779E+00	1.030E+01	1.598E+00	2.394E+01	1.752E+01	3.312E+02
18.39.40	9.530E+01	8.528E+00	1.072E+01	1.559E+00	2.393E+01	1.736E+01	3.312E+02
18.39.50	9.451E+01	7.280E+00	1.026E+01	1.551E+00	2.392E+01	1.744E+01	3.299E+02
18.40.00	9.269E+01	8.652E+00	1.097E+01	1.607E+00	2.393E+01	1.744E+01	3.318E+02
18.40.10	9.269E+01	8.320E+00	1.047E+01	1.635E+00	2.394E+01	1.744E+01	3.318E+02
18.40.20	9.230E+01	8.611E+00	1.035E+01	1.542E+00	2.395E+01	1.748E+01	3.306E+02
18.40.30	9.045E+01	1.152E+01	1.200E+01	1.455E+00	2.359E+01	1.784E+01	3.342E+02
18.40.40	8.801E+01	9.651E+00	1.242E+01	1.538E+00	2.357E+01	1.776E+01	3.299E+02
18.40.50	8.969E+01	1.006E+01	1.179E+01	1.581E+00	2.364E+01	1.808E+01	3.293E+02
18.41.00	8.860E+01	7.904E+00	1.101E+01	1.498E+00	2.362E+01	1.820E+01	3.312E+02
18.41.10	8.936E+01	5.948E+00	1.063E+01		2.364E+01	1.768E+01	3.324E+02
18.41.20	9.240E+01	5.366E+00	8.073E+00		2.365E+01	1.680E+01	3.293E+02
18.41.30	8.596E+01	6.739E+00	8.942E+00		2.344E+01	1.760E+01	3.324E+02
18.41.40	8.857E+01	8.486E+00	1.051E+01	1.676E+00	2.331E+01	1.772E+01	3.318E+02
18.41.50	8.992E+01	9.484E+00	9.977E+00	1.632E+00	2.331E+01	1.764E+01	3.336E+02
18.42.00	8.989E+01	6.822E+00	1.167E+01	1.787E+00	2.342E+01	1.788E+01	3.318E+02
18.42.10	8.989E+01	1.114E+01	1.353E+01	1.716E+00	2.344E+01	1.740E+01	3.324E+02
18.42.20	9.220E+01	1.139E+01	1.345E+01	1.992E+00	2.352E+01	1.756E+01	3.318E+02
18.42.30	9.015E+01	9.776E+00	1.324E+01	1.853E+00	2.341E+01	1.776E+01	3.336E+02
18.42.40	8.929E+01	1.168E+01	1.283E+01	1.774E+00	2.346E+01	1.756E+01	3.354E+02
18.42.50	9.319E+01	9.401E+00	1.043E+01	1.811E+00	2.370E+01	1.804E+01	3.336E+02
18.43.00	9.589E+01	1.052E+01	1.051E+01	1.674E+00	2.371E+01	1.800E+01	3.342E+02
18.43.10	9.441E+01	9.817E+00	9.729E+00	1.585E+00	2.381E+01	1.792E+01	3.324E+02
18.43.20	9.381E+01	8.486E+00	8.818E+00	1.572E+00	2.375E+01	1.776E+01	3.330E+02
18.43.30	9.414E+01	8.652E+00	8.404E+00	1.606E+00	2.372E+01	1.784E+01	3.324E+02
18.43.40	9.355E+01	9.484E+00	9.025E+00	1.682E+00	2.385E+01	1.776E+01	3.336E+02
18.43.50	9.573E+01	8.736E+00	1.001E+01	1.626E+00	2.385E+01	1.780E+01	3.342E+02
18.44.00	9.655E+01	8.403E+00	1.022E+01	1.627E+00	2.380E+01	1.796E+01	3.336E+02
18.44.10	9.108E+01	9.526E+00	1.026E+01	1.579E+00	2.389E+01	1.796E+01	3.330E+02
18.44.20	9.160E+01	8.652E+00	1.126E+01	1.598E+00	2.388E+01	1.796E+01	3.312E+02
18.44.30	9.137E+01	1.227E+01	1.233E+01	1.629E+00	2.385E+01	1.796E+01	3.330E+02
18.44.40	9.490E+01	8.694E+00	1.188E+01	1.557E+00	2.397E+01	1.784E+01	3.330E+02
18.44.50	9.401E+01	9.235E+00	1.283E+01	1.722E+00	2.400E+01	1.772E+01	3.324E+02
18.45.00	9.708E+01	9.360E+00	1.299E+01	1.634E+00	2.399E+01	1.780E+01	3.306E+02
18.45.10	9.589E+01	9.360E+00	1.357E+01	1.641E+00	2.396E+01	1.784E+01	3.330E+02
18.45.20	9.688E+01	7.529E+00	1.287E+01	1.528E+00	2.389E+01	1.784E+01	3.354E+02
18.45.30	9.517E+01	9.110E+00	1.246E+01	1.516E+00	2.400E+01	1.772E+01	3.324E+02
18.45.40	9.655E+01	8.195E+00	1.192E+01	1.642E+00	2.401E+01	1.776E+01	3.330E+02
18.45.50	1.005E+02	9.817E+00	1.270E+01	1.677E+00	2.407E+01	1.768E+01	3.324E+02
18.46.00	9.999E+01	9.276E+00	1.142E+01	1.546E+00	2.413E+01	1.760E+01	3.299E+02
18.46.10	1.005E+02	1.056E+01	1.130E+01	1.655E+00	2.407E+01	1.756E+01	3.324E+02
18.46.20	9.942E+01	1.119E+01	1.208E+01	1.678E+00	2.381E+01	1.784E+01	3.336E+02
18.46.30	9.758E+01	9.859E+00	1.155E+01	1.766E+00	2.366E+01	1.820E+01	3.318E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B2.- Continued

(f) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
18.46.40	9.467E+01	9.401E+00	1.018E+01	1.661E+00	2.376E+01	1.808E+01	3.306E+02
18.46.50	9.362E+01	8.112E+00	1.167E+01	1.704E+00	2.393E+01	1.792E+01	3.312E+02
18.47.00	9.903E+01	1.119E+01	1.333E+01	1.772E+00	2.394E+01	1.812E+01	3.318E+02
18.47.10	9.774E+01	1.135E+01	1.378E+01	1.791E+00	2.390E+01	1.820E+01	3.330E+02
18.47.20	1.025E+02	7.155E+00	1.345E+01	1.752E+00	2.382E+01	1.832E+01	3.324E+02
18.47.30	9.843E+01	6.947E+00	1.051E+01	1.666E+00	2.372E+01	1.832E+01	3.312E+02
18.47.40	9.817E+01	7.363E+00	1.204E+01	1.746E+00	2.378E+01	1.816E+01	3.306E+02
18.47.50	9.787E+01	6.240E+00	1.345E+01	1.692E+00	2.380E+01	1.800E+01	3.324E+02
18.48.00	1.002E+02	8.444E+00	1.337E+01	1.853E+00	2.368E+01	1.804E+01	3.330E+02
18.48.10	9.708E+01	1.006E+01	1.270E+01	1.714E+00	2.316E+01	1.888E+01	3.318E+02
18.48.20	8.857E+01	1.006E+01	1.424E+01	1.785E+00	2.300E+01	1.888E+01	3.324E+02
18.48.30	8.504E+01	1.052E+01	1.229E+01	1.814E+00	2.326E+01	1.864E+01	3.312E+02
18.48.40	9.015E+01	8.569E+00	9.232E+00	1.945E+00	2.327E+01	1.860E+01	3.318E+02
18.48.50	9.157E+01	8.153E+00	9.522E+00	1.942E+00	2.326E+01	1.868E+01	3.312E+02
18.49.00	8.900E+01	1.060E+01	1.204E+01	1.853E+00	2.340E+01	1.856E+01	3.312E+02
18.49.10	9.269E+01	1.193E+01	1.138E+01	1.882E+00	2.318E+01	1.868E+01	3.318E+02
18.49.20	8.751E+01	1.010E+01	1.030E+01	2.066E+00	2.311E+01	1.872E+01	3.324E+02
18.49.30	8.797E+01	1.110E+01	1.006E+01	1.992E+00	2.294E+01	1.864E+01	3.306E+02
18.49.40	8.309E+01	8.944E+00	9.646E+00	1.894E+00	2.299E+01	1.860E+01	3.318E+02
18.49.50	8.467E+01	9.360E+00	9.315E+00	2.021E+00	2.296E+01	1.872E+01	3.306E+02
18.50.00	8.382E+01	9.318E+00	9.232E+00	1.902E+00	2.306E+01	1.848E+01	3.312E+02
18.50.10	8.507E+01	9.651E+00	1.192E+01	1.774E+00	2.312E+01	1.852E+01	3.312E+02
18.50.20	8.533E+01	8.070E+00	1.295E+01	1.709E+00	2.323E+01	1.856E+01	3.324E+02
18.50.30	8.933E+01	8.652E+00	1.192E+01	1.718E+00	2.334E+01	1.852E+01	3.318E+02
18.50.40	9.065E+01	1.056E+01	9.356E+00	1.819E+00	2.332E+01	1.852E+01	3.348E+02
18.50.50	8.985E+01	9.692E+00	9.646E+00	1.855E+00	2.329E+01	1.796E+01	3.330E+02
18.51.00	8.903E+01	9.110E+00	1.092E+01	1.985E+00	2.329E+01	1.836E+01	3.336E+02
18.51.10	8.705E+01	9.235E+00	1.179E+01	1.917E+00	2.328E+01	1.852E+01	3.342E+02
18.51.20	8.692E+01	5.824E+00	1.221E+01	1.840E+00	2.316E+01	1.848E+01	3.324E+02
18.51.30	8.540E+01	8.361E+00	1.092E+01	1.710E+00	2.324E+01	1.848E+01	3.312E+02
18.51.40	8.679E+01	1.081E+01	9.190E+00	1.710E+00	2.320E+01	1.848E+01	3.324E+02
18.51.50	8.415E+01	9.984E+00	1.076E+01	1.737E+00	2.323E+01	1.856E+01	3.312E+02
18.52.00	8.395E+01	9.484E+00	1.138E+01	1.574E+00	2.306E+01	1.848E+01	3.318E+02
18.52.10	8.408E+01	8.694E+00	9.853E+00	1.662E+00	2.306E+01	1.848E+01	3.312E+02
18.52.20	8.294E+01	7.529E+00	9.480E+00	1.806E+00	2.328E+01	1.872E+01	3.306E+02
18.52.30	8.484E+01	5.782E+00	1.088E+01	1.779E+00	2.323E+01	1.868E+01	3.299E+02
18.52.40	8.325E+01	6.448E+00	1.204E+01	1.974E+00	2.334E+01	1.892E+01	3.299E+02
18.52.50	8.233E+01	8.860E+00	1.229E+01	2.080E+00	2.318E+01	1.876E+01	3.324E+02
18.53.00	8.104E+01	7.280E+00	1.047E+01	1.942E+00	2.332E+01	1.876E+01	3.306E+02
18.53.10	8.375E+01	8.819E+00	9.936E+00	1.983E+00	2.325E+01	1.872E+01	3.330E+02
18.53.20	8.391E+01	1.110E+01	1.030E+01	1.890E+00	2.325E+01	1.872E+01	3.318E+02
18.53.30	8.494E+01	1.015E+01	9.439E+00	1.836E+00	2.304E+01	1.872E+01	3.318E+02
18.53.40	8.131E+01	8.736E+00	9.770E+00	1.922E+00	2.300E+01	1.888E+01	3.318E+02
18.53.50	8.428E+01	8.569E+00	1.055E+01	1.760E+00	2.306E+01	1.876E+01	3.306E+02
18.54.00	8.325E+01	1.023E+01	1.010E+01	2.040E+00	2.289E+01	1.884E+01	3.312E+02
18.54.10	8.448E+01	1.094E+01	1.018E+01	1.931E+00	2.307E+01	1.872E+01	3.312E+02
18.54.20	8.372E+01	9.484E+00	1.092E+01	1.873E+00	2.318E+01	1.860E+01	3.306E+02
18.54.30	8.510E+01	8.611E+00	1.213E+01	1.973E+00	2.319E+01	1.860E+01	3.312E+02
18.54.40	8.754E+01	8.652E+00	1.159E+01	1.795E+00	2.321E+01	1.852E+01	3.299E+02
18.54.50	8.893E+01	9.900E+00	1.275E+01	1.755E+00	2.320E+01	1.844E+01	3.318E+02

APPENDIX B

TABLE B2.- Concluded

(f) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
18.55.00	8.834E+01	9.193E+00	1.213E+01	1.824E+00	2.329E+01	1.832E+01	3.312E+02
18.55.10	8.738E+01	1.023E+01	1.159E+01	1.826E+00	2.320E+01	1.836E+01	3.312E+02
18.55.20	8.768E+01	1.081E+01	1.213E+01	1.822E+00	2.326E+01	1.832E+01	3.324E+02
18.55.30	8.787E+01	9.651E+00	1.229E+01	1.918E+00	2.325E+01	1.828E+01	3.318E+02
18.55.40	8.926E+01	1.089E+01	1.084E+01	1.826E+00	2.320E+01	1.836E+01	3.324E+02
18.55.50	8.649E+01	1.089E+01	8.280E+00	1.692E+00	2.306E+01	1.864E+01	3.312E+02
18.56.00	8.801E+01	1.123E+01	7.576E+00	1.549E+00	2.316E+01	1.852E+01	3.312E+02
18.56.10	8.745E+01	8.736E+00	7.700E+00	1.656E+00	2.318E+01	1.840E+01	3.318E+02
18.56.20	8.675E+01	8.652E+00	1.006E+01	1.476E+00	2.340E+01	1.796E+01	3.306E+02
18.56.30	8.748E+01	7.404E+00	1.022E+01	1.561E+00	2.359E+01	1.760E+01	3.312E+02
18.56.40	8.939E+01	8.860E+00	9.811E+00	1.552E+00	2.362E+01	1.752E+01	3.306E+02
18.56.50	9.012E+01	9.692E+00	8.652E+00	1.661E+00	2.332E+01	1.808E+01	3.306E+02
18.57.00	8.949E+01	7.945E+00	7.162E+00	1.628E+00	2.331E+01	1.816E+01	3.293E+02
18.57.10	8.791E+01	8.028E+00	7.907E+00	1.777E+00	2.336E+01	1.800E+01	3.299E+02
18.57.20	9.038E+01	1.040E+01	8.238E+00	1.817E+00	2.345E+01	1.784E+01	3.306E+02
18.57.30	8.731E+01	1.006E+01	8.445E+00	1.614E+00	2.355E+01	1.764E+01	3.299E+02
18.57.40	8.764E+01	1.048E+01	6.955E+00	1.742E+00	2.354E+01	1.760E+01	3.281E+02
18.57.50	8.811E+01	1.081E+01	9.315E+00	1.687E+00	2.350E+01	1.776E+01	3.263E+02
18.58.00	8.972E+01	1.077E+01	1.014E+01	1.689E+00	2.356E+01	1.748E+01	3.287E+02
18.58.10	8.933E+01	9.068E+00	9.770E+00	1.619E+00	2.345E+01	1.780E+01	3.287E+02
18.58.20	8.721E+01	5.449E+00	9.977E+00	1.840E+00	2.351E+01	1.764E+01	3.306E+02
18.58.30	8.959E+01	6.489E+00	8.818E+00	1.733E+00	2.351E+01	1.760E+01	3.306E+02
18.58.40	8.553E+01	9.360E+00	9.108E+00	1.641E+00	2.330E+01	1.792E+01	3.318E+02
18.58.50	9.104E+01	1.015E+01	1.266E+01	1.468E+00	2.332E+01	1.796E+01	3.287E+02

APPENDIX B

TABLE B3.- AIRCRAFT DATA FOR REGIONAL TRAVERSE EXPERIMENT ON JULY 18, 1978

(a) Leg K → H

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
15.26.00	6.520E+01	1.198E+01	9.604E+00		2.383E+01	1.944E+01	4.106E+02
15.26.10	6.534E+01	1.231E+01	9.977E+00		2.363E+01	1.976E+01	4.204E+02
15.26.20	6.362E+01	1.239E+01	1.022E+01		2.374E+01	1.988E+01	4.112E+02
15.26.30	6.609E+01	1.144E+01	1.022E+01		2.393E+01	1.976E+01	4.069E+02
15.26.40	6.715E+01	1.152E+01	8.859E+00		2.372E+01	2.012E+01	4.082E+02
15.26.50	6.339E+01	9.776E+00	9.025E+00		2.379E+01	1.820E+01	4.143E+02
15.27.00	6.596E+01	8.902E+00	9.025E+00		2.367E+01	1.712E+01	4.155E+02
15.27.10	6.606E+01	1.031E+01	8.942E+00		2.361E+01	1.952E+01	4.130E+02
15.27.20	6.418E+01	9.443E+00	8.362E+00		2.366E+01	2.052E+01	4.082E+02
15.27.30	6.421E+01	9.776E+00	8.569E+00		2.366E+01	2.052E+01	4.106E+02
15.27.40	6.227E+01	1.002E+01	7.741E+00		2.361E+01	2.068E+01	4.082E+02
15.27.50	6.296E+01	9.360E+00	7.162E+00		2.371E+01	2.028E+01	4.106E+02
15.28.00	6.299E+01	1.052E+01	6.996E+00		2.365E+01	2.060E+01	4.088E+02
15.28.10	6.279E+01	9.484E+00	6.872E+00		2.369E+01	2.008E+01	4.143E+02
15.28.20	6.223E+01	8.652E+00	6.913E+00		2.366E+01	2.044E+01	4.130E+02
15.28.30	6.108E+01	9.609E+00	6.375E+00		2.374E+01	2.068E+01	4.112E+02
15.28.40	6.042E+01	1.040E+01	6.955E+00		2.386E+01	1.744E+01	4.130E+02
15.28.50	6.362E+01	1.035E+01	7.534E+00		2.380E+01	1.988E+01	4.118E+02
15.29.00	6.243E+01	9.526E+00	7.452E+00		2.388E+01	2.060E+01	4.118E+02
15.29.10	6.256E+01	1.035E+01	6.748E+00		2.398E+01	2.044E+01	4.106E+02
15.29.20	6.345E+01	9.276E+00	6.417E+00		2.400E+01	2.024E+01	4.118E+02
15.29.30	6.507E+01	8.403E+00	6.582E+00		2.398E+01	2.040E+01	4.118E+02
15.29.40	6.243E+01	6.947E+00	7.700E+00		2.403E+01	2.040E+01	4.100E+02
15.29.50	6.388E+01	7.737E+00	7.990E+00		2.395E+01	2.068E+01	4.106E+02
15.30.00	6.441E+01	7.321E+00	8.569E+00		2.395E+01	2.084E+01	4.106E+02
15.30.10	6.451E+01	5.824E+00	8.445E+00		2.402E+01	2.076E+01	4.100E+02
15.30.20	6.435E+01	6.323E+00	8.197E+00		2.424E+01	1.976E+01	4.112E+02
15.30.30	6.491E+01	8.860E+00	7.576E+00		2.426E+01	1.944E+01	4.075E+02
15.30.40	6.527E+01	1.015E+01	7.866E+00		2.418E+01	2.000E+01	4.137E+02
15.30.50	6.372E+01	7.404E+00	6.831E+00		2.432E+01	2.020E+01	4.118E+02
15.31.00	6.477E+01	7.446E+00	6.748E+00		2.421E+01	2.064E+01	4.075E+02
15.31.10	6.243E+01	7.862E+00	7.203E+00		2.399E+01	2.064E+01	4.124E+02
15.31.20	6.207E+01	9.235E+00	6.624E+00		2.402E+01	2.032E+01	4.137E+02
15.31.30	6.217E+01	9.152E+00	6.499E+00		2.422E+01	2.000E+01	4.149E+02
15.31.40	6.530E+01	8.153E+00	6.168E+00		2.440E+01	1.960E+01	4.124E+02
15.31.50	6.487E+01	7.820E+00	5.754E+00		2.443E+01	1.972E+01	4.118E+02
15.32.00	6.398E+01	9.568E+00	6.085E+00		2.450E+01	1.976E+01	4.124E+02
15.32.10	6.322E+01	8.403E+00	6.251E+00		2.460E+01	1.944E+01	4.118E+02
15.32.20	6.798E+01	8.320E+00	6.499E+00		2.462E+01	1.976E+01	4.149E+02
15.32.30	6.738E+01	7.945E+00	6.831E+00		2.468E+01	1.900E+01	4.112E+02
15.32.40	6.751E+01	7.987E+00	6.210E+00		2.457E+01	1.988E+01	4.149E+02
15.32.50	6.600E+01	7.737E+00	6.499E+00		2.455E+01	2.000E+01	4.094E+02
15.33.00	6.553E+01	6.780E+00	7.534E+00		2.454E+01	1.992E+01	4.137E+02
15.33.10	6.392E+01	7.529E+00	7.162E+00		2.452E+01	2.028E+01	4.118E+02
15.33.20	6.405E+01	7.446E+00	7.452E+00		2.469E+01	1.964E+01	4.088E+02
15.33.30	6.930E+01	7.488E+00	7.576E+00		2.468E+01	1.964E+01	4.155E+02
15.33.40	6.623E+01	7.945E+00	7.866E+00		2.460E+01	2.048E+01	4.149E+02
15.33.50	6.448E+01	7.862E+00	7.948E+00		2.472E+01	2.072E+01	4.082E+02
15.34.00	6.210E+01	7.862E+00	7.990E+00		2.475E+01	2.012E+01	4.094E+02
15.34.10	6.600E+01	7.321E+00	7.410E+00		2.481E+01	1.996E+01	4.088E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B3.- Continued

(a) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
15.34.20	6.444E+01	6.988E+00	7.410E+00		2.480E+01	2.012E+01	4.124E+02
15.34.30	6.223E+01	6.656E+00	7.576E+00		2.481E+01	2.036E+01	4.063E+02
15.34.40	6.237E+01	7.571E+00	6.665E+00		2.489E+01	1.964E+01	4.069E+02
15.34.50	6.656E+01	7.945E+00	6.541E+00		2.480E+01	2.052E+01	4.130E+02
15.35.00	6.177E+01	6.739E+00	6.748E+00		2.473E+01	2.064E+01	4.075E+02
15.35.10	6.101E+01	6.572E+00	7.162E+00		2.468E+01	2.048E+01	4.082E+02
15.35.20	6.316E+01	7.280E+00	6.582E+00		2.469E+01	2.004E+01	4.112E+02
15.35.30	6.326E+01	7.529E+00	5.547E+00		2.476E+01	1.988E+01	4.100E+02
15.35.40	6.557E+01	6.988E+00	5.878E+00		2.484E+01	1.924E+01	4.130E+02
15.35.50	6.761E+01	6.947E+00	6.127E+00		2.492E+01	1.932E+01	4.088E+02
15.36.00	6.659E+01	7.238E+00	7.327E+00		2.479E+01	1.976E+01	4.124E+02
15.36.10	6.210E+01	6.364E+00	7.369E+00		2.467E+01	2.020E+01	4.155E+02
15.36.20	6.138E+01	5.699E+00	7.203E+00		2.479E+01	1.968E+01	4.088E+02
15.36.30	6.438E+01	6.406E+00	7.203E+00		2.477E+01	2.008E+01	4.137E+02
15.36.40	6.289E+01	6.697E+00	6.375E+00		2.479E+01	1.996E+01	4.088E+02
15.36.50	6.395E+01	5.740E+00	6.706E+00		2.484E+01	1.988E+01	4.112E+02
15.37.00	6.392E+01	7.030E+00	7.038E+00		2.478E+01	2.012E+01	4.149E+02
15.37.10	6.246E+01	5.366E+00	6.582E+00		2.489E+01	1.944E+01	4.088E+02
15.37.20	6.593E+01	5.075E+00	6.706E+00		2.489E+01	1.924E+01	4.143E+02
15.37.30	6.821E+01	6.822E+00	6.375E+00		2.507E+01	1.884E+01	4.112E+02
15.37.40	6.903E+01	6.822E+00	6.541E+00		2.495E+01	1.944E+01	4.124E+02
15.37.50	6.699E+01	7.820E+00	6.251E+00		2.497E+01	1.916E+01	4.118E+02
15.38.00	6.669E+01	7.488E+00	5.464E+00		2.511E+01	1.848E+01	4.106E+02
15.38.10	7.491E+01	6.656E+00	5.713E+00		2.507E+01	1.924E+01	4.161E+02
15.38.20	6.580E+01	6.406E+00	5.713E+00		2.504E+01	1.996E+01	4.112E+02
15.38.30	6.355E+01	5.116E+00	5.340E+00		2.504E+01	1.988E+01	4.106E+02
15.38.40	6.642E+01	5.865E+00	6.955E+00		2.507E+01	1.912E+01	4.088E+02
15.38.50	7.134E+01	7.113E+00	7.493E+00		2.491E+01	1.948E+01	4.124E+02
15.39.00	6.646E+01	5.491E+00	6.499E+00		2.493E+01	1.904E+01	4.137E+02
15.39.10	6.765E+01	6.115E+00	6.085E+00		2.484E+01	1.968E+01	4.143E+02
15.39.20	6.560E+01	5.865E+00	7.245E+00		2.501E+01	1.908E+01	4.100E+02
15.39.30	6.530E+01	7.196E+00	6.831E+00		2.505E+01	1.876E+01	4.143E+02
15.39.40	6.708E+01	6.864E+00	6.872E+00		2.512E+01	1.904E+01	4.094E+02
15.39.50	6.497E+01	5.532E+00	7.327E+00		2.519E+01	1.908E+01	4.118E+02
15.40.00	6.510E+01	6.323E+00	6.996E+00		2.508E+01	1.984E+01	4.149E+02
15.40.10	6.263E+01	6.448E+00	6.210E+00		2.526E+01	1.940E+01	4.069E+02
15.40.20	6.576E+01	7.612E+00	5.796E+00		2.506E+01	2.004E+01	4.143E+02
15.40.30	6.091E+01	8.153E+00	5.464E+00		2.510E+01	1.944E+01	4.069E+02
15.40.40	6.418E+01	7.779E+00	5.216E+00		2.501E+01	1.948E+01	4.137E+02
15.40.50	6.296E+01	7.113E+00	6.541E+00		2.506E+01	1.920E+01	4.124E+02
15.41.00	6.484E+01	7.987E+00	6.996E+00		2.511E+01	1.964E+01	4.137E+02
15.41.10	6.237E+01	6.281E+00	6.085E+00		2.516E+01	1.944E+01	4.094E+02
15.41.20	6.171E+01	5.574E+00	6.541E+00		2.508E+01	2.004E+01	4.106E+02
15.41.30	5.916E+01	7.696E+00	7.038E+00		2.511E+01	2.012E+01	4.143E+02
15.41.40	5.900E+01	6.531E+00	6.872E+00		2.530E+01	1.988E+01	4.051E+02
15.41.50	6.144E+01	4.742E+00	7.617E+00		2.520E+01	2.024E+01	4.106E+02
15.42.00	6.006E+01	5.200E+00	7.700E+00		2.528E+01	2.004E+01	4.106E+02
15.42.10	6.372E+01	6.240E+00	7.410E+00		2.542E+01	1.908E+01	4.075E+02
15.42.20	7.052E+01	8.112E+00	6.665E+00		2.540E+01	1.936E+01	4.112E+02
15.42.30	7.365E+01	6.947E+00	6.292E+00		2.553E+01	1.940E+01	4.088E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B3.- Continued

(a) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
15.42.40	7.296E+01	6.198E+00	6.996E+00		2.540E+01	1.984E+01	4.075E+02
15.42.50	7.392E+01	7.446E+00	7.493E+00		2.535E+01	1.956E+01	4.075E+02
15.43.00	7.692E+01	7.529E+00	7.534E+00		2.524E+01	2.024E+01	4.161E+02
15.43.10	7.755E+01	6.156E+00	8.238E+00		2.545E+01	1.964E+01	4.045E+02
15.43.20	7.847E+01	8.112E+00	8.404E+00		2.535E+01	2.000E+01	4.100E+02
15.43.30	7.398E+01	7.321E+00	8.114E+00		2.545E+01	1.972E+01	4.069E+02
15.43.40	7.438E+01	6.572E+00	6.872E+00		2.555E+01	1.892E+01	4.057E+02
15.43.50	7.596E+01	6.323E+00	6.417E+00		2.541E+01	1.984E+01	4.118E+02
15.44.00	7.055E+01	7.571E+00	6.789E+00		2.543E+01	2.012E+01	4.106E+02
15.44.10	6.732E+01	5.408E+00	6.044E+00		2.547E+01	2.052E+01	4.075E+02
15.44.20	6.652E+01	7.363E+00	6.251E+00		2.537E+01	2.068E+01	4.088E+02
15.44.30	6.560E+01	6.281E+00	5.630E+00		2.538E+01	2.004E+01	4.051E+02
15.44.40	6.705E+01	4.576E+00	6.541E+00		2.540E+01	1.980E+01	4.106E+02
15.44.50	6.666E+01	5.241E+00	6.417E+00		2.524E+01	2.012E+01	4.118E+02
15.45.00	6.421E+01	6.115E+00	6.251E+00		2.520E+01	2.004E+01	4.137E+02
15.45.10	6.418E+01	6.489E+00	6.044E+00		2.525E+01	2.016E+01	4.155E+02
15.45.20	6.359E+01	6.739E+00	4.140E+00		2.537E+01	1.992E+01	4.075E+02
15.45.30	6.560E+01	5.366E+00	4.098E+00		2.525E+01	2.036E+01	4.137E+02
15.45.40	6.098E+01	6.572E+00	5.340E+00		2.527E+01	2.024E+01	4.075E+02
15.45.50	6.316E+01	8.320E+00	5.920E+00		2.541E+01	1.896E+01	4.124E+02
15.46.00	6.649E+01	6.572E+00	5.257E+00		2.530E+01	2.008E+01	4.167E+02
15.46.10	6.303E+01	5.824E+00	6.085E+00		2.547E+01	1.924E+01	4.069E+02
15.46.20	6.748E+01	5.532E+00	5.837E+00		2.548E+01	1.948E+01	4.167E+02
15.46.30	6.359E+01	6.656E+00	5.506E+00		2.551E+01	1.988E+01	4.063E+02
15.46.40	6.421E+01	6.614E+00	5.506E+00		2.544E+01	2.008E+01	4.124E+02
15.46.50	6.042E+01	6.489E+00	4.843E+00		2.547E+01	2.000E+01	4.088E+02
15.47.00	6.253E+01	7.113E+00	5.423E+00		2.553E+01	1.976E+01	4.082E+02
15.47.10	6.428E+01	5.616E+00	5.796E+00		2.557E+01	1.952E+01	4.082E+02
15.47.20	6.385E+01	6.864E+00	6.706E+00		2.547E+01	1.948E+01	4.094E+02
15.47.30	6.359E+01	4.950E+00	5.796E+00		2.550E+01	1.916E+01	4.088E+02
15.47.40	6.732E+01	5.740E+00	6.375E+00		2.549E+01	1.924E+01	4.118E+02
15.47.50	6.444E+01	6.032E+00	6.665E+00		2.547E+01	1.972E+01	4.124E+02
15.48.00	6.626E+01	6.323E+00	7.203E+00		2.573E+01	1.876E+01	4.057E+02
15.48.10	6.893E+01	5.657E+00	6.996E+00		2.560E+01	1.976E+01	4.143E+02
15.48.20	6.421E+01	5.782E+00	6.044E+00		2.570E+01	1.968E+01	4.069E+02
15.48.30	6.692E+01	4.659E+00	5.630E+00		2.585E+01	1.844E+01	4.057E+02
15.48.40	7.032E+01	6.198E+00	5.506E+00		2.566E+01	1.896E+01	4.106E+02
15.48.50	6.646E+01	6.240E+00	5.340E+00		2.564E+01	1.900E+01	4.100E+02
15.49.00	6.768E+01	5.200E+00	5.796E+00		2.566E+01	1.948E+01	4.149E+02
15.49.10	7.015E+01	5.075E+00	6.831E+00		2.564E+01	1.940E+01	4.051E+02
15.49.20	6.629E+01	6.739E+00	8.155E+00		2.562E+01	1.928E+01	4.100E+02
15.49.30	6.609E+01	7.529E+00	9.315E+00		2.556E+01	1.948E+01	4.137E+02
15.49.40	6.662E+01	5.574E+00	1.055E+01		2.568E+01	1.908E+01	4.063E+02
15.49.50	6.837E+01	5.990E+00	9.770E+00		2.550E+01	1.932E+01	4.130E+02
15.50.00	6.887E+01	6.614E+00	9.604E+00		2.558E+01	1.884E+01	4.100E+02
15.50.10	6.933E+01	5.491E+00	9.977E+00		2.553E+01	1.968E+01	4.155E+02
15.50.20	6.623E+01	5.532E+00	8.280E+00		2.562E+01	1.960E+01	4.088E+02
15.50.30	6.804E+01	6.697E+00	7.948E+00		2.576E+01	1.916E+01	4.063E+02
15.50.40	6.751E+01	5.449E+00	9.149E+00		2.575E+01	1.848E+01	4.094E+02
15.50.50	7.045E+01	8.236E+00	1.039E+01		2.573E+01	1.964E+01	4.124E+02
15.51.00	6.702E+01	7.737E+00	8.983E+00		2.560E+01	1.944E+01	4.063E+02
15.51.10	6.649E+01	6.614E+00	8.528E+00		2.546E+01	1.932E+01	4.124E+02
15.51.20	6.623E+01	7.072E+00	7.990E+00		2.550E+01	1.884E+01	4.143E+02
15.51.30	6.933E+01	7.113E+00	8.114E+00		2.550E+01	1.840E+01	4.155E+02
15.51.40	7.009E+01	7.155E+00	8.280E+00		2.553E+01	1.924E+01	4.143E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B3.- Continued

(b) Spiral at H

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
15.53.00	6.718E+01	5.075E+00	6.665E+00		2.580E+01	1.832E+01	4.130E+02
15.53.10	6.979E+01	7.488E+00	5.299E+00		2.557E+01	1.952E+01	4.149E+02
15.53.20	6.458E+01	6.947E+00	6.334E+00		2.553E+01	1.952E+01	4.118E+02
15.53.30	6.527E+01	8.112E+00	6.582E+00		2.539E+01	2.004E+01	4.130E+02
15.53.40	6.303E+01	5.532E+00	7.162E+00		2.601E+01	1.964E+01	3.801E+02
15.53.50	6.916E+01	5.824E+00	5.796E+00		2.654E+01	1.936E+01	3.257E+02
15.54.00	6.652E+01	6.988E+00	5.920E+00		2.698E+01	1.936E+01	2.682E+02
15.54.10	7.227E+01	9.068E+00	5.589E+00		2.779E+01	1.920E+01	1.973E+02
15.54.20	7.289E+01	7.612E+00	5.589E+00		2.802E+01	1.992E+01	1.656E+02
15.54.30	7.108E+01	6.614E+00	6.044E+00		2.811E+01	1.992E+01	1.533E+02
15.54.40	6.685E+01	6.198E+00	5.630E+00		2.827E+01	1.964E+01	1.350E+02
15.54.50	7.316E+01	7.696E+00	6.996E+00		2.863E+01	2.032E+01	1.130E+02
15.55.00	6.827E+01	7.904E+00	6.251E+00		2.847E+01	2.024E+01	1.246E+02
15.55.10	6.966E+01	6.531E+00	5.671E+00		2.822E+01	1.976E+01	1.478E+02
15.55.20	7.243E+01	7.696E+00	6.334E+00		2.775E+01	1.996E+01	1.955E+02
15.55.30	6.996E+01	7.488E+00	6.375E+00		2.751E+01	1.960E+01	2.175E+02
15.55.40	6.910E+01	5.491E+00	5.837E+00		2.746E+01	1.992E+01	2.267E+02
15.55.50	6.751E+01	7.155E+00	6.251E+00		2.717E+01	1.904E+01	2.676E+02
15.56.00	7.065E+01	7.654E+00	7.245E+00		2.672E+01	1.904E+01	3.018E+02
15.56.10	6.906E+01	6.822E+00	7.369E+00		2.627E+01	1.960E+01	3.409E+02
15.56.20	6.504E+01	4.825E+00	7.534E+00		2.590E+01	1.984E+01	3.801E+02
15.56.30	6.530E+01	7.155E+00	9.066E+00		2.557E+01	1.996E+01	4.094E+02
15.56.40	6.501E+01	7.654E+00	7.824E+00		2.522E+01	1.948E+01	4.393E+02
15.56.50	6.583E+01	5.324E+00	8.238E+00		2.507E+01	1.840E+01	4.668E+02
15.57.00	6.903E+01	7.321E+00	7.410E+00		2.477E+01	1.864E+01	4.962E+02
15.57.10	6.906E+01	7.280E+00	6.706E+00		2.460E+01	1.740E+01	5.273E+02
15.57.20	7.144E+01	7.945E+00	6.831E+00		2.409E+01	1.808E+01	5.640E+02
15.57.30	6.906E+01	7.862E+00	6.789E+00		2.386E+01	1.780E+01	5.921E+02
15.57.40	6.900E+01	6.156E+00	6.458E+00		2.349E+01	1.856E+01	6.196E+02
15.57.50	6.636E+01	5.075E+00	7.410E+00		2.327E+01	1.820E+01	6.483E+02
15.58.00	6.860E+01	5.408E+00	7.741E+00		2.291E+01	1.904E+01	6.813E+02
15.58.10	6.501E+01	6.656E+00	7.162E+00		2.266E+01	1.864E+01	7.094E+02
15.58.20	6.501E+01	8.611E+00	6.706E+00		2.243E+01	1.908E+01	7.308E+02
15.58.30	6.497E+01	5.699E+00	6.044E+00		2.267E+01	1.592E+01	7.522E+02
15.58.40	6.791E+01	6.156E+00	6.624E+00		2.225E+01	1.676E+01	7.846E+02
15.58.50	6.774E+01	7.571E+00	7.162E+00		2.212E+01	1.556E+01	8.158E+02
15.59.00	6.583E+01	5.657E+00	7.245E+00		2.158E+01	1.752E+01	8.481E+02
15.59.10	6.279E+01	4.742E+00	7.907E+00		2.126E+01	1.716E+01	8.793E+02
15.59.20	6.458E+01	4.368E+00	8.901E+00		2.101E+01	1.664E+01	9.093E+02
15.59.30	6.365E+01	6.780E+00	9.522E+00		2.043E+01	1.780E+01	9.490E+02
15.59.40	6.246E+01	7.945E+00	1.014E+01		1.999E+01	1.716E+01	9.905E+02
15.59.50	6.279E+01	7.612E+00	8.694E+00		2.002E+01	1.392E+01	1.029E+03
16.00.00	6.299E+01	6.905E+00	9.025E+00		1.984E+01	1.264E+01	1.069E+03
16.00.10	6.405E+01	6.656E+00	8.280E+00		1.956E+01	1.260E+01	1.101E+03
16.00.20	6.339E+01	7.196E+00	8.197E+00		1.940E+01	1.236E+01	1.129E+03
16.00.30	6.527E+01	8.195E+00	8.983E+00		1.917E+01	1.244E+01	1.156E+03
16.00.40	6.619E+01	7.820E+00	9.397E+00		1.904E+01	1.216E+01	1.181E+03
16.00.50	6.593E+01	5.907E+00	8.445E+00		1.878E+01	1.228E+01	1.208E+03
16.01.00	6.510E+01	5.740E+00	8.487E+00		1.853E+01	1.188E+01	1.239E+03
16.01.10	6.385E+01	5.033E+00	8.362E+00		1.828E+01	1.132E+01	1.274E+03

*No data due to instrument malfunction.

TABLE B3.- Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
16.01.20	6.263E+01	4.908E+00	8.983E+00		1.815E+01	1.044E+01	1.306E+03
16.01.30	6.230E+01	6.656E+00	8.362E+00		1.804E+01	1.016E+01	1.337E+03
16.01.40	5.801E+01	7.113E+00	7.700E+00		1.767E+01	9.920E+00	1.374E+03
16.01.50	5.864E+01	5.449E+00	6.872E+00		1.753E+01	8.600E+00	1.404E+03
16.02.00	5.705E+01	7.446E+00	7.617E+00		1.733E+01	8.720E+00	1.439E+03
16.02.10	5.049E+01	6.531E+00	6.706E+00		1.701E+01	8.560E+00	1.469E+03
16.02.20	5.339E+01	4.700E+00	6.499E+00		1.679E+01	8.800E+00	1.497E+03

45

APPENDIX B

TABLE B3.- Continued

(c) Leg H → A

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
16.10.00	6.992E+01	7.571E+00	9.025E+00		2.601E+01	1.980E+01	4.185E+02
16.10.10	7.075E+01	8.403E+00	8.611E+00		2.602E+01	1.876E+01	4.155E+02
16.10.20	7.372E+01	8.195E+00	7.286E+00		2.590E+01	1.940E+01	4.179E+02
16.10.30	7.071E+01	8.985E+00	8.155E+00		2.588E+01	1.908E+01	4.204E+02
16.10.40	7.042E+01	7.529E+00	8.611E+00		2.599E+01	1.836E+01	4.167E+02
16.10.50	7.260E+01	5.283E+00	7.369E+00		2.595E+01	1.852E+01	4.222E+02
16.11.00	7.147E+01	6.947E+00	6.913E+00		2.591E+01	1.880E+01	4.234E+02
16.11.10	7.015E+01	8.278E+00	7.120E+00		2.596E+01	1.820E+01	4.179E+02
16.11.20	6.755E+01	6.032E+00	6.831E+00		2.582E+01	1.932E+01	4.247E+02
16.11.30	6.854E+01	7.155E+00	8.321E+00		2.598E+01	1.896E+01	4.161E+02
16.11.40	6.821E+01	8.070E+00	7.452E+00		2.592E+01	1.860E+01	4.204E+02
16.11.50	6.718E+01	5.865E+00	6.665E+00		2.609E+01	1.752E+01	4.210E+02
16.12.00	6.923E+01	6.531E+00	6.541E+00		2.601E+01	1.820E+01	4.253E+02
16.12.10	6.926E+01	7.779E+00	4.719E+00		2.616E+01	1.828E+01	4.173E+02
16.12.20	6.959E+01	6.822E+00	5.920E+00		2.619E+01	1.772E+01	4.173E+02
16.12.30	6.972E+01	8.444E+00	6.292E+00		2.599E+01	1.868E+01	4.192E+02
16.12.40	6.699E+01	7.404E+00	5.920E+00		2.579E+01	1.928E+01	4.198E+02
16.12.50	6.560E+01	8.403E+00	6.541E+00		2.586E+01	1.912E+01	4.228E+02
16.13.00	6.646E+01	5.241E+00	5.671E+00		2.596E+01	1.856E+01	4.167E+02
16.13.10	6.946E+01	5.200E+00	5.671E+00		2.586E+01	1.844E+01	4.228E+02
16.13.20	6.956E+01	8.112E+00	6.955E+00		2.588E+01	1.920E+01	4.259E+02
16.13.30	6.692E+01	7.612E+00	6.706E+00		2.607E+01	1.916E+01	4.192E+02
16.13.40	6.705E+01	9.568E+00	6.831E+00		2.614E+01	1.912E+01	4.185E+02
16.13.50	6.963E+01	7.696E+00	6.541E+00		2.614E+01	1.888E+01	4.167E+02
16.14.00	6.847E+01	6.905E+00	4.885E+00		2.599E+01	1.904E+01	4.210E+02
16.14.10	6.854E+01	5.990E+00	6.706E+00		2.593E+01	1.916E+01	4.179E+02
16.14.20	6.682E+01	7.072E+00	7.079E+00		2.586E+01	1.908E+01	4.228E+02
16.14.30	6.791E+01	8.320E+00	7.617E+00		2.585E+01	1.912E+01	4.198E+02
16.14.40	7.065E+01	8.777E+00	8.114E+00		2.590E+01	1.876E+01	4.204E+02
16.14.50	7.035E+01	8.777E+00	7.493E+00		2.585E+01	1.900E+01	4.210E+02
16.15.00	6.705E+01	7.820E+00	8.114E+00		2.579E+01	1.940E+01	4.210E+02
16.15.10	6.821E+01	8.569E+00	6.334E+00		2.578E+01	1.948E+01	4.234E+02
16.15.20	6.834E+01	7.196E+00	6.955E+00		2.602E+01	1.968E+01	4.204E+02
16.15.30	6.464E+01	4.076E+00	7.203E+00		2.587E+01	1.932E+01	4.161E+02
16.15.40	6.765E+01	6.780E+00	6.582E+00		2.576E+01	1.924E+01	4.228E+02
16.15.50	6.854E+01	8.236E+00	8.569E+00		2.578E+01	1.900E+01	4.228E+02
16.16.00	6.844E+01	8.736E+00	8.197E+00		2.586E+01	1.924E+01	4.198E+02
16.16.10	6.606E+01	9.152E+00	7.245E+00		2.588E+01	1.896E+01	4.216E+02
16.16.20	6.699E+01	9.401E+00	6.003E+00		2.605E+01	1.772E+01	4.185E+02
16.16.30	7.177E+01	9.152E+00	5.216E+00		2.590E+01	1.876E+01	4.234E+02
16.16.40	6.798E+01	7.862E+00	4.968E+00		2.599E+01	1.924E+01	4.204E+02
16.16.50	6.507E+01	7.446E+00	4.968E+00		2.618E+01	1.944E+01	4.192E+02
16.17.00	6.266E+01	7.363E+00	4.678E+00		2.605E+01	1.980E+01	4.124E+02
16.17.10	6.039E+01	7.404E+00	3.353E+00		2.615E+01	1.884E+01	4.173E+02
16.17.20	6.339E+01	5.865E+00	4.347E+00		2.627E+01	1.812E+01	4.118E+02
16.17.30	6.273E+01	6.905E+00	5.920E+00		2.629E+01	1.904E+01	4.167E+02
16.17.40	6.349E+01	7.696E+00	7.990E+00		2.629E+01	1.924E+01	4.161E+02
16.17.50	6.385E+01	7.280E+00	7.824E+00		2.614E+01	1.936E+01	4.149E+02
16.18.00	6.444E+01	8.486E+00	6.748E+00		2.599E+01	1.976E+01	4.143E+02
16.18.10	6.332E+01	7.987E+00	6.748E+00		2.587E+01	1.976E+01	4.198E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B3.- Continued

(c) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
16.18.20	6.451E+01	7.363E+00	8.569E+00		2.607E+01	1.892E+01	4.137E+02
16.18.30	6.728E+01	7.820E+00	7.369E+00		2.592E+01	1.920E+01	4.179E+02
16.18.40	6.672E+01	6.780E+00	6.706E+00		2.586E+01	1.876E+01	4.204E+02
16.18.50	6.949E+01	7.571E+00	8.859E+00		2.583E+01	1.940E+01	4.222E+02
16.19.00	6.920E+01	5.907E+00	8.238E+00		2.591E+01	1.916E+01	4.192E+02
16.19.10	6.982E+01	7.945E+00	8.569E+00		2.607E+01	1.872E+01	4.192E+02
16.19.20	7.170E+01	7.529E+00	9.066E+00		2.610E+01	1.844E+01	4.198E+02
16.19.30	7.213E+01	5.990E+00	7.617E+00		2.604E+01	1.888E+01	4.161E+02
16.19.40	7.603E+01	7.155E+00	7.576E+00		2.619E+01	1.768E+01	4.124E+02
16.19.50	7.537E+01	7.612E+00	7.079E+00		2.624E+01	1.656E+01	4.173E+02
16.20.00	7.527E+01	6.905E+00	9.604E+00		2.604E+01	1.832E+01	4.222E+02
16.20.10	7.827E+01	7.488E+00	7.617E+00		2.611E+01	1.892E+01	4.210E+02
16.20.20	7.682E+01	8.569E+00	6.706E+00		2.605E+01	1.956E+01	4.149E+02
16.20.30	7.253E+01	7.529E+00	6.955E+00		2.599E+01	1.940E+01	4.155E+02
16.20.40	6.976E+01	6.406E+00	9.480E+00		2.605E+01	1.928E+01	4.253E+02
16.20.50	6.989E+01	9.276E+00	9.190E+00		2.620E+01	1.932E+01	4.075E+02
16.21.00	7.326E+01	7.196E+00	6.458E+00		2.605E+01	1.880E+01	4.161E+02
16.21.10	7.487E+01	6.572E+00	6.085E+00		2.605E+01	1.844E+01	4.198E+02
16.21.20	7.441E+01	6.240E+00	6.458E+00		2.601E+01	1.840E+01	4.204E+02
16.21.30	7.956E+01	4.867E+00	8.197E+00		2.581E+01	1.956E+01	4.228E+02
16.21.40	7.507E+01	5.782E+00	8.735E+00		2.579E+01	1.948E+01	4.167E+02
16.21.50	7.745E+01	5.158E+00	7.907E+00		2.597E+01	1.764E+01	4.210E+02
16.22.00	7.279E+01	6.406E+00	7.162E+00		2.588E+01	1.900E+01	4.259E+02
16.22.10	7.253E+01	7.280E+00	8.321E+00		2.595E+01	1.936E+01	4.167E+02
16.22.20	6.936E+01	6.614E+00	8.197E+00		2.600E+01	1.880E+01	4.173E+02
16.22.30	7.326E+01	7.488E+00	6.458E+00		2.575E+01	1.964E+01	4.185E+02
16.22.40	7.101E+01	8.320E+00	5.589E+00		2.583E+01	1.964E+01	4.198E+02
16.22.50	6.976E+01	8.985E+00	6.706E+00		2.592E+01	1.876E+01	4.185E+02
16.23.00	7.560E+01	6.531E+00	7.783E+00		2.600E+01	1.840E+01	4.204E+02
16.23.10	7.840E+01	7.238E+00	8.652E+00		2.617E+01	1.844E+01	4.161E+02
16.23.20	8.685E+01	7.820E+00	8.487E+00		2.614E+01	1.832E+01	4.161E+02
16.23.30	8.593E+01	6.656E+00	8.983E+00		2.611E+01	1.908E+01	4.216E+02
16.23.40	8.071E+01	8.195E+00	9.894E+00		2.617E+01	1.880E+01	4.137E+02
16.23.50	8.042E+01	6.240E+00	6.417E+00		2.607E+01	1.896E+01	4.167E+02
16.24.00	7.715E+01	7.696E+00	6.375E+00		2.614E+01	1.864E+01	4.192E+02
16.24.10	7.913E+01	8.320E+00	8.362E+00		2.619E+01	1.928E+01	4.149E+02
16.24.20	7.715E+01	7.779E+00	8.694E+00		2.617E+01	1.908E+01	4.173E+02
16.24.30	7.972E+01	8.569E+00	8.942E+00		2.605E+01	1.976E+01	4.118E+02
16.24.40	7.725E+01	8.195E+00	8.528E+00		2.592E+01	1.952E+01	4.149E+02
16.24.50	8.269E+01	7.404E+00	6.996E+00		2.583E+01	1.956E+01	4.173E+02
16.25.00	8.154E+01	8.320E+00	7.452E+00		2.571E+01	1.932E+01	4.192E+02
16.25.10	8.358E+01	9.984E+00	6.251E+00		2.582E+01	1.844E+01	4.185E+02
16.25.20	8.134E+01	6.489E+00	6.417E+00		2.579E+01	1.828E+01	4.198E+02
16.25.30	8.052E+01	6.864E+00	5.506E+00		2.585E+01	1.764E+01	4.198E+02
16.25.40	7.880E+01	6.988E+00	4.926E+00		2.592E+01	1.740E+01	4.185E+02
16.25.50	7.342E+01	6.489E+00	4.636E+00		2.579E+01	1.784E+01	4.192E+02
16.26.00	7.929E+01	7.072E+00	5.837E+00		2.570E+01	1.836E+01	4.192E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B3.- Continued

(d) Leg A → E

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
17.32.30	6.920E+01	1.098E+01	7.162E+00	1.937E+00	2.595E+01	1.880E+01	4.528E+02
17.32.40	7.170E+01	8.070E+00	1.072E+01	2.026E+00	2.627E+01	1.796E+01	4.363E+02
17.32.50	7.137E+01	6.281E+00	8.859E+00	1.753E+00	2.626E+01	1.816E+01	4.369E+02
17.33.00	6.854E+01	4.492E+00	7.907E+00	1.823E+00	2.614E+01	1.844E+01	4.436E+02
17.33.10	7.368E+01	8.444E+00	8.114E+00	1.849E+00	2.633E+01	1.776E+01	4.350E+02
17.33.20	7.108E+01	8.486E+00	8.238E+00	1.580E+00	2.650E+01	1.628E+01	4.405E+02
17.33.30	6.999E+01	9.027E+00	8.735E+00	1.534E+00	2.637E+01	1.760E+01	4.399E+02
17.33.40	7.299E+01	9.609E+00	9.522E+00	1.837E+00	2.642E+01	1.732E+01	4.436E+02
17.33.50	7.091E+01	1.156E+01	9.853E+00	1.611E+00	2.646E+01	1.748E+01	4.350E+02
17.34.00	7.128E+01	9.817E+00	8.280E+00	1.716E+00	2.646E+01	1.656E+01	4.424E+02
17.34.10	7.543E+01	1.114E+01	8.155E+00	1.745E+00	2.664E+01	1.600E+01	4.350E+02
17.34.20	7.190E+01	6.531E+00	8.942E+00	1.646E+00	2.654E+01	1.696E+01	4.460E+02
17.34.30	7.428E+01	6.115E+00	9.522E+00	1.921E+00	2.662E+01	1.672E+01	4.375E+02
17.34.40	7.444E+01	9.443E+00	8.238E+00	1.535E+00	2.690E+01	1.372E+01	4.363E+02
17.34.50	6.986E+01	1.002E+01	8.197E+00	1.719E+00	2.665E+01	1.580E+01	4.418E+02
17.35.00	7.418E+01	7.446E+00	8.073E+00	1.686E+00	2.671E+01	1.652E+01	4.363E+02
17.35.10	7.167E+01	8.403E+00	7.700E+00	1.825E+00	2.673E+01	1.688E+01	4.381E+02
17.35.20	7.408E+01	7.987E+00	7.369E+00	1.718E+00	2.677E+01	1.656E+01	4.363E+02
17.35.30	7.359E+01	5.574E+00	9.480E+00	1.844E+00	2.663E+01	1.728E+01	4.412E+02
17.35.40	7.375E+01	7.238E+00	9.025E+00	1.834E+00	2.658E+01	1.848E+01	4.332E+02
17.35.50	7.606E+01	8.320E+00	6.996E+00	1.807E+00	2.646E+01	1.824E+01	4.381E+02
17.36.00	7.461E+01	8.028E+00	7.700E+00	1.699E+00	2.653E+01	1.796E+01	4.399E+02
17.36.10	7.203E+01	8.528E+00	8.197E+00	2.010E+00	2.662E+01	1.624E+01	4.393E+02
17.36.20	7.121E+01	8.652E+00	8.114E+00	1.762E+00	2.662E+01	1.608E+01	4.363E+02
17.36.30	7.576E+01	7.280E+00	8.818E+00	2.249E+00	2.637E+01	1.580E+01	4.460E+02
17.36.40	7.514E+01	9.235E+00	8.983E+00	2.586E+00	2.651E+01	1.672E+01	4.332E+02
17.36.50	7.698E+01	9.692E+00	8.611E+00	1.899E+00	2.641E+01	1.732E+01	4.387E+02
17.37.00	7.385E+01	1.110E+01	9.604E+00	1.942E+00	2.638E+01	1.724E+01	4.405E+02
17.37.10	7.184E+01	1.052E+01	8.942E+00	1.833E+00	2.645E+01	1.656E+01	4.363E+02
17.37.20	7.524E+01	9.235E+00	7.369E+00	1.732E+00	2.637E+01	1.668E+01	4.399E+02
17.37.30	7.335E+01	8.153E+00	8.445E+00	1.733E+00	2.625E+01	1.780E+01	4.405E+02
17.37.40	7.382E+01	7.155E+00	9.811E+00	1.839E+00	2.624E+01	1.760E+01	4.448E+02
17.37.50	7.187E+01	6.156E+00	8.528E+00	1.844E+00	2.628E+01	1.752E+01	4.399E+02
17.38.00	6.821E+01	7.571E+00	8.073E+00	1.899E+00	2.628E+01	1.880E+01	4.479E+02
17.38.10	6.824E+01	7.654E+00	7.617E+00	2.082E+00	2.617E+01	1.952E+01	4.326E+02
17.38.20	6.728E+01	8.819E+00	8.611E+00	1.707E+00	2.615E+01	1.888E+01	4.381E+02
17.38.30	6.629E+01	7.696E+00	9.439E+00	2.089E+00	2.601E+01	1.848E+01	4.436E+02
17.38.40	6.494E+01	4.742E+00	6.334E+00	2.171E+00	2.598E+01	1.944E+01	4.363E+02
17.38.50	6.824E+01	5.200E+00	6.913E+00	1.978E+00	2.609E+01	1.820E+01	4.418E+02
17.39.00	6.471E+01	5.699E+00	7.534E+00	1.993E+00	2.620E+01	1.780E+01	4.387E+02
17.39.10	6.560E+01	6.947E+00	9.687E+00	2.053E+00	2.605E+01	1.872E+01	4.424E+02
17.39.20	6.778E+01	6.115E+00	1.001E+01	2.039E+00	2.598E+01	1.868E+01	4.412E+02
17.39.30	6.745E+01	9.027E+00	9.066E+00	2.138E+00	2.605E+01	1.924E+01	4.442E+02
17.39.40	7.114E+01	9.651E+00	7.203E+00	2.319E+00	2.625E+01	1.904E+01	4.387E+02
17.39.50	7.500E+01	1.006E+01	6.831E+00	2.042E+00	2.617E+01	1.936E+01	4.393E+02
17.40.00	8.048E+01	7.820E+00	7.824E+00	2.086E+00	2.627E+01	1.880E+01	4.375E+02
17.40.10	8.217E+01	6.697E+00	8.445E+00	1.959E+00	2.616E+01	1.876E+01	4.381E+02
17.40.20	8.332E+01	5.948E+00	1.059E+01	2.195E+00	2.608E+01	1.892E+01	4.405E+02
17.40.30	8.490E+01	9.152E+00	1.159E+01	2.098E+00	2.613E+01	1.864E+01	4.393E+02
17.40.40	8.322E+01	6.489E+00	9.977E+00	2.007E+00	2.608E+01	1.868E+01	4.405E+02

APPENDIX B

TABLE B3.- Continued

(d) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
17.40.50	8.157E+01	5.491E+00	1.146E+01	1.963E+00	2.611E+01	1.832E+01	4.393E+02
17.41.00	8.279E+01	5.699E+00	1.150E+01	2.049E+00	2.608E+01	1.864E+01	4.405E+02
17.41.10	8.266E+01	7.030E+00	1.126E+01	2.080E+00	2.610E+01	1.848E+01	4.418E+02
17.41.20	8.121E+01	7.196E+00	1.188E+01	2.108E+00	2.613E+01	1.844E+01	4.399E+02
17.41.30	7.860E+01	8.569E+00	1.051E+01	1.938E+00	2.635E+01	1.736E+01	4.381E+02
17.41.40	7.689E+01	6.697E+00	9.729E+00	2.057E+00	2.653E+01	1.576E+01	4.454E+02
17.41.50	7.487E+01	6.656E+00	9.687E+00	1.878E+00	2.651E+01	1.616E+01	4.344E+02
17.42.00	7.477E+01	7.404E+00	7.990E+00	1.859E+00	2.655E+01	1.480E+01	4.436E+02
17.42.10	7.223E+01	6.572E+00	6.541E+00	1.867E+00	2.652E+01	1.556E+01	4.405E+02
17.42.20	7.537E+01	7.196E+00	7.493E+00	1.795E+00	2.642E+01	1.672E+01	4.442E+02
17.42.30	7.368E+01	7.446E+00	9.190E+00	1.897E+00	2.636E+01	1.728E+01	4.412E+02
17.42.40	7.606E+01	6.697E+00	8.280E+00	1.882E+00	2.619E+01	1.828E+01	4.412E+02
17.42.50	7.461E+01	8.569E+00	7.576E+00	2.017E+00	2.612E+01	1.880E+01	4.381E+02
17.43.00	7.279E+01	8.528E+00	7.659E+00	1.939E+00	2.604E+01	1.824E+01	4.442E+02
17.43.10	7.180E+01	1.002E+01	8.569E+00	2.201E+00	2.591E+01	1.960E+01	4.467E+02
17.43.20	6.976E+01	6.988E+00	9.273E+00	2.313E+00	2.606E+01	1.896E+01	4.405E+02
17.43.30	7.385E+01	8.278E+00	6.789E+00	2.075E+00	2.613E+01	1.884E+01	4.399E+02
17.43.40	7.141E+01	1.027E+01	6.085E+00	2.247E+00	2.610E+01	1.972E+01	4.430E+02
17.43.50	7.052E+01	7.737E+00	6.624E+00	2.211E+00	2.611E+01	1.940E+01	4.350E+02
17.44.00	7.147E+01	8.694E+00	7.866E+00	2.050E+00	2.609E+01	1.884E+01	4.412E+02
17.44.10	7.401E+01	6.364E+00	8.445E+00	2.253E+00	2.607E+01	1.888E+01	4.418E+02
17.44.20	7.345E+01	7.030E+00	6.955E+00	2.175E+00	2.594E+01	1.920E+01	4.412E+02
17.44.30	7.524E+01	8.361E+00	5.009E+00	2.099E+00	2.595E+01	1.908E+01	4.405E+02
17.44.40	7.451E+01	9.110E+00	6.003E+00	2.365E+00	2.590E+01	1.904E+01	4.430E+02
17.44.50	7.283E+01	1.052E+01	7.907E+00	2.387E+00	2.584E+01	1.936E+01	4.393E+02
17.45.00	7.319E+01	8.070E+00	9.853E+00	2.324E+00	2.568E+01	1.972E+01	4.424E+02
17.45.10	7.236E+01	7.862E+00	9.894E+00	2.372E+00	2.570E+01	1.964E+01	4.405E+02
17.45.20	7.434E+01	6.739E+00	9.522E+00	2.096E+00	2.571E+01	1.936E+01	4.399E+02
17.45.30	7.444E+01	6.364E+00	8.611E+00	2.198E+00	2.567E+01	1.928E+01	4.424E+02
17.45.40	7.372E+01	8.361E+00	7.576E+00	2.221E+00	2.571E+01	1.880E+01	4.424E+02
17.45.50	7.794E+01	8.819E+00	7.741E+00	2.299E+00	2.572E+01	1.884E+01	4.418E+02
17.46.00	7.751E+01	9.110E+00	8.404E+00	2.239E+00	2.581E+01	1.840E+01	4.393E+02
17.46.10	7.665E+01	6.905E+00	5.920E+00	2.185E+00	2.583E+01	1.792E+01	4.424E+02
17.46.20	7.887E+01	8.112E+00	5.796E+00	2.249E+00	2.580E+01	1.848E+01	4.412E+02
17.46.30	7.698E+01	7.280E+00	6.003E+00	2.106E+00	2.590E+01	1.776E+01	4.393E+02
17.46.40	7.989E+01	1.056E+01	6.085E+00	2.080E+00	2.595E+01	1.704E+01	4.412E+02
17.46.50	7.425E+01	8.278E+00	5.257E+00	2.364E+00	2.590E+01	1.788E+01	4.436E+02
17.47.00	7.408E+01	8.819E+00	4.719E+00	1.987E+00	2.610E+01	1.676E+01	4.381E+02
17.47.10	7.114E+01	1.010E+01	5.506E+00	1.985E+00	2.582E+01	1.736E+01	4.454E+02
17.47.20	7.421E+01	8.444E+00	8.031E+00	2.420E+00	2.597E+01	1.832E+01	4.387E+02
17.47.30	7.524E+01	9.318E+00	9.025E+00	1.994E+00	2.586E+01	1.852E+01	4.381E+02
17.47.40	8.061E+01	7.446E+00	7.824E+00	2.168E+00	2.570E+01	1.884E+01	4.405E+02
17.47.50	8.108E+01	8.278E+00	8.362E+00	2.069E+00	2.572E+01	1.832E+01	4.412E+02
17.48.00	8.256E+01	6.988E+00	1.001E+01	2.128E+00	2.580E+01	1.756E+01	4.412E+02
17.48.10	7.609E+01	5.532E+00	8.362E+00	2.191E+00	2.575E+01	1.584E+01	4.418E+02
17.48.20	8.134E+01	5.824E+00	7.948E+00	2.444E+00	2.575E+01	1.736E+01	4.418E+02
17.48.30	8.081E+01	6.697E+00	8.859E+00	2.170E+00	2.567E+01	1.764E+01	4.418E+02
17.48.40	8.352E+01	7.779E+00	7.741E+00	1.893E+00	2.566E+01	1.764E+01	4.405E+02
17.48.50	8.335E+01	7.321E+00	8.404E+00	1.936E+00	2.564E+01	1.716E+01	4.412E+02
17.49.00	8.378E+01	7.737E+00	7.245E+00	1.917E+00	2.568E+01	1.692E+01	4.418E+02

APPENDIX B

TABLE B3.- Continued

(d) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
17.49.10	8.193E+01	7.404E+00	6.127E+00	2.056E+00	2.568E+01	1.676E+01	4.424E+02
17.49.20	8.266E+01	9.193E+00	6.085E+00	2.008E+00	2.577E+01	1.652E+01	4.405E+02
17.49.30	8.068E+01	7.280E+00	6.458E+00	1.898E+00	2.606E+01	1.384E+01	4.393E+02
17.49.40	7.854E+01	6.614E+00	5.547E+00	1.891E+00	2.598E+01	1.344E+01	4.399E+02
17.49.50	7.883E+01	6.697E+00	5.092E+00	2.285E+00	2.546E+01	1.864E+01	4.418E+02
17.50.00	8.695E+01	9.401E+00	4.843E+00	2.295E+00	2.568E+01	1.648E+01	4.375E+02
17.50.10	8.391E+01	8.236E+00	6.127E+00	1.911E+00	2.590E+01	1.564E+01	4.418E+02
17.50.20	8.038E+01	7.904E+00	7.245E+00	2.050E+00	2.561E+01	1.512E+01	4.430E+02
17.50.30	8.368E+01	9.484E+00	7.286E+00	2.138E+00	2.581E+01	1.596E+01	4.375E+02
17.50.40	8.309E+01	8.985E+00	7.245E+00	2.279E+00	2.538E+01	1.596E+01	4.442E+02
17.50.50	8.708E+01	7.072E+00	7.741E+00	2.136E+00	2.572E+01	1.496E+01	4.381E+02
17.51.00	8.784E+01	7.820E+00	8.445E+00	1.964E+00	2.585E+01	1.428E+01	4.412E+02
17.51.10	8.609E+01	6.364E+00	9.108E+00	1.962E+00	2.590E+01	1.404E+01	4.399E+02
17.51.20	8.339E+01	6.073E+00	7.824E+00	1.813E+00	2.589E+01	1.428E+01	4.387E+02
17.51.30	8.431E+01	8.236E+00	9.066E+00	1.832E+00	2.584E+01	1.452E+01	4.393E+02
17.51.40	9.124E+01	8.528E+00	1.109E+01	1.860E+00	2.585E+01	1.432E+01	4.393E+02
17.51.50	9.094E+01	7.612E+00	1.022E+01	2.007E+00	2.585E+01	1.432E+01	4.393E+02
17.52.00	8.751E+01	6.406E+00	8.569E+00	1.926E+00	2.584E+01	1.448E+01	4.393E+02
17.52.10	8.649E+01	6.115E+00	6.996E+00	1.876E+00	2.583E+01	1.448E+01	4.393E+02
17.52.20	8.837E+01	7.321E+00	5.920E+00	1.867E+00	2.584E+01	1.444E+01	4.393E+02
17.52.30	8.860E+01	5.948E+00	5.547E+00	1.838E+00	2.584E+01	1.428E+01	4.399E+02
17.52.40	8.863E+01	6.614E+00	6.831E+00	1.821E+00	2.585E+01	1.432E+01	4.399E+02
17.52.50	8.916E+01	7.529E+00	7.120E+00	1.836E+00	2.583E+01	1.448E+01	4.387E+02
17.53.00	9.471E+01	8.860E+00	6.582E+00	1.875E+00	2.575E+01	1.476E+01	4.412E+02
17.53.10	9.319E+01	6.739E+00	6.665E+00	2.041E+00	2.560E+01	1.568E+01	4.405E+02
17.53.20	9.652E+01	6.947E+00	7.245E+00	2.093E+00	2.550E+01	1.624E+01	4.405E+02
17.53.30	9.556E+01	8.028E+00	6.624E+00	2.048E+00	2.547E+01	1.636E+01	4.405E+02
17.53.40	9.708E+01	7.196E+00	6.210E+00	2.016E+00	2.545E+01	1.652E+01	4.399E+02
17.53.50	9.589E+01	7.238E+00	6.085E+00	2.008E+00	2.544E+01	1.656E+01	4.405E+02
17.54.00	9.593E+01	8.736E+00	6.582E+00	1.978E+00	2.546E+01	1.648E+01	4.412E+02
17.54.10	1.013E+02	6.489E+00	5.920E+00	2.155E+00	2.556E+01	1.592E+01	4.399E+02
17.54.20	1.027E+02	7.155E+00	8.155E+00	2.001E+00	2.558E+01	1.564E+01	4.418E+02
17.54.30	9.962E+01	7.945E+00	8.321E+00	2.090E+00	2.551E+01	1.608E+01	4.412E+02
17.54.40	1.002E+02	7.945E+00	6.706E+00	2.053E+00	2.539E+01	1.676E+01	4.412E+02
17.54.50	9.662E+01	8.361E+00	7.369E+00	2.060E+00	2.541E+01	1.676E+01	4.393E+02
17.55.00	9.949E+01	6.448E+00	8.445E+00	2.141E+00	2.551E+01	1.584E+01	4.418E+02
17.55.10	1.011E+02	6.531E+00	9.811E+00	2.225E+00	2.553E+01	1.584E+01	4.405E+02
17.55.20	9.672E+01	6.489E+00	1.121E+01	2.015E+00	2.547E+01	1.628E+01	4.399E+02
17.55.30	9.909E+01	7.113E+00	1.142E+01	1.997E+00	2.543E+01	1.636E+01	4.405E+02
17.55.40	9.900E+01	8.777E+00	1.126E+01	2.174E+00	2.540E+01	1.632E+01	4.418E+02
17.55.50	9.817E+01	7.404E+00	1.101E+01	2.154E+00	2.541E+01	1.624E+01	4.418E+02
17.56.00	9.985E+01	8.694E+00	1.022E+01	2.138E+00	2.545E+01	1.588E+01	4.418E+02
17.56.10	1.026E+02	8.195E+00	1.047E+01	2.050E+00	2.549E+01	1.556E+01	4.418E+02
17.56.20	1.019E+02	7.945E+00	1.039E+01	2.095E+00	2.547E+01	1.600E+01	4.405E+02
17.56.30	1.006E+02	6.822E+00	9.397E+00	2.122E+00	2.552E+01	1.576E+01	4.399E+02
17.56.40	1.031E+02	6.614E+00	8.362E+00	2.113E+00	2.553E+01	1.564E+01	4.405E+02
17.56.50	1.054E+02	6.780E+00	7.410E+00	2.172E+00	2.549E+01	1.588E+01	4.412E+02
17.57.00	1.052E+02	6.032E+00	6.872E+00	2.116E+00	2.560E+01	1.520E+01	4.412E+02
17.57.10	1.005E+02	6.780E+00	6.003E+00	2.052E+00	2.560E+01	1.540E+01	4.405E+02
17.57.20	1.018E+02	8.195E+00	6.085E+00	2.022E+00	2.549E+01	1.596E+01	4.424E+02

APPENDIX B

TABLE B3.- Continued

(d) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
17.57.30	1.059E+02	7.737E+00	8.404E+00	2.245E+00	2.546E+01	1.612E+01	4.418E+02
17.57.40	1.086E+02	7.030E+00	9.190E+00	2.191E+00	2.551E+01	1.580E+01	4.412E+02
17.57.50	1.073E+02	6.323E+00	8.901E+00	2.174E+00	2.560E+01	1.524E+01	4.424E+02
17.58.00	1.047E+02	6.115E+00	8.238E+00	2.171E+00	2.564E+01	1.508E+01	4.412E+02
17.58.10	1.016E+02	8.403E+00	6.748E+00	2.118E+00	2.565E+01	1.504E+01	4.405E+02
17.58.20	1.032E+02	8.403E+00	7.866E+00	2.180E+00	2.565E+01	1.508E+01	4.412E+02
17.58.30	1.004E+02	7.904E+00	9.397E+00	2.055E+00	2.565E+01	1.508E+01	4.412E+02
17.58.40	1.000E+02	8.486E+00	1.001E+01	2.067E+00	2.561E+01	1.520E+01	4.418E+02
17.58.50	1.023E+02	7.737E+00	9.936E+00	2.004E+00	2.557E+01	1.540E+01	4.412E+02
17.59.00	1.038E+02	9.734E+00	7.410E+00	2.011E+00	2.560E+01	1.544E+01	4.387E+02
17.59.10	1.047E+02	7.488E+00	7.327E+00	1.731E+00	2.555E+01	1.480E+01	4.418E+02
17.59.20	1.039E+02	6.988E+00	9.066E+00	1.873E+00	2.553E+01	1.568E+01	4.412E+02
17.59.30	1.033E+02	7.737E+00	9.646E+00	1.845E+00	2.554E+01	1.548E+01	4.418E+02
17.59.40	1.025E+02	8.361E+00	7.948E+00	1.803E+00	2.552E+01	1.536E+01	4.418E+02
17.59.50	1.052E+02	1.098E+01	7.203E+00	1.782E+00	2.559E+01	1.480E+01	4.424E+02
18.00.00	9.820E+01	1.064E+01	8.280E+00	1.957E+00	2.559E+01	1.476E+01	4.430E+02
18.00.10	9.791E+01	8.902E+00	8.818E+00	1.987E+00	2.556E+01	1.488E+01	4.424E+02
18.00.20	1.027E+02	8.985E+00	8.031E+00	1.860E+00	2.560E+01	1.480E+01	4.412E+02
18.00.30	9.847E+01	8.860E+00	8.942E+00	1.859E+00	2.562E+01	1.448E+01	4.424E+02
18.00.40	9.434E+01	7.571E+00	9.232E+00	1.890E+00	2.560E+01	1.456E+01	4.430E+02
18.00.50	9.639E+01	4.992E+00	8.611E+00	1.974E+00	2.557E+01	1.476E+01	4.430E+02
18.01.00	9.688E+01	5.075E+00	8.942E+00	1.965E+00	2.556E+01	1.480E+01	4.430E+02
18.01.10	1.014E+02	6.614E+00	8.859E+00	1.793E+00	2.562E+01	1.456E+01	4.424E+02
18.01.20	9.672E+01	6.947E+00	8.652E+00	1.774E+00	2.566E+01	1.428E+01	4.436E+02
18.01.30	9.659E+01	6.864E+00	7.038E+00	1.883E+00	2.572E+01	1.416E+01	4.430E+02
18.01.40	9.319E+01	6.156E+00	7.120E+00	1.660E+00	2.573E+01	1.420E+01	4.412E+02
18.01.50	9.464E+01	4.492E+00	8.031E+00	1.590E+00	2.565E+01	1.440E+01	4.405E+02
18.02.00	9.817E+01	5.657E+00	8.487E+00	1.705E+00	2.559E+01	1.444E+01	4.418E+02
18.02.10	9.520E+01	6.822E+00	6.499E+00	1.795E+00	2.554E+01	1.460E+01	4.418E+02
18.02.20	9.652E+01	6.364E+00	6.458E+00	1.781E+00	2.545E+01	1.472E+01	4.448E+02
18.02.30	9.764E+01	8.236E+00	5.299E+00	1.797E+00	2.543E+01	1.500E+01	4.442E+02
18.02.40	9.820E+01	1.015E+01	4.885E+00	1.807E+00	2.544E+01	1.504E+01	4.436E+02
18.02.50	9.560E+01	8.236E+00	6.872E+00	1.770E+00	2.541E+01	1.528E+01	4.442E+02
18.03.00	1.005E+02	8.195E+00	8.569E+00	1.836E+00	2.543E+01	1.528E+01	4.436E+02
18.03.10	1.012E+02	7.904E+00	7.700E+00	1.798E+00	2.559E+01	1.440E+01	4.430E+02
18.03.20	1.005E+02	7.820E+00	7.286E+00	1.821E+00	2.568E+01	1.412E+01	4.430E+02
18.03.30	8.923E+01	6.364E+00	7.369E+00	1.652E+00	2.568E+01	1.412E+01	4.436E+02
18.03.40	9.015E+01	6.988E+00	5.547E+00	1.604E+00	2.583E+01	1.380E+01	4.424E+02
18.03.50	8.629E+01	6.198E+00	6.955E+00	1.608E+00	2.593E+01	1.332E+01	4.430E+02
18.04.00	8.537E+01	6.780E+00	6.665E+00	1.683E+00	2.595E+01	1.328E+01	4.424E+02
18.04.10	8.936E+01	6.489E+00	4.885E+00	1.556E+00	2.587E+01	1.356E+01	4.430E+02
18.04.20	8.847E+01	5.324E+00	6.085E+00	1.674E+00	2.589E+01	1.344E+01	4.436E+02
18.04.30	8.517E+01	4.118E+00	8.321E+00	1.615E+00	2.612E+01	1.272E+01	4.436E+02
18.04.40	7.959E+01	7.072E+00	1.014E+01	1.595E+00	2.632E+01	1.168E+01	4.436E+02
18.04.50	8.184E+01	5.158E+00	1.014E+01	1.608E+00	2.639E+01	1.140E+01	4.436E+02
18.05.00	8.141E+01	5.699E+00	9.439E+00	2.033E+00	2.643E+01	1.120E+01	4.442E+02
18.05.10	8.207E+01	5.782E+00	9.770E+00	2.207E+00	2.645E+01	1.080E+01	4.454E+02
18.05.20	8.111E+01	6.240E+00	8.031E+00	1.860E+00	2.645E+01	1.088E+01	4.430E+02
18.05.30	8.322E+01	6.073E+00	7.452E+00	1.476E+00	2.643E+01	1.092E+01	4.442E+02
18.05.40	8.385E+01	5.200E+00	7.534E+00	1.486E+00	2.646E+01	1.068E+01	4.436E+02

APPENDIX B

TABLE B3.- Continued

(d) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
18.05.50	8.395E+01	5.532E+00	6.499E+00	1.342E+00	2.653E+01	1.044E+01	4.430E+02
18.06.00	8.316E+01	5.782E+00	5.630E+00	1.406E+00	2.647E+01	1.072E+01	4.424E+02
18.06.10	8.131E+01	6.822E+00	5.961E+00	1.316E+00	2.630E+01	1.204E+01	4.430E+02
18.06.20	8.259E+01	7.196E+00	4.636E+00	1.353E+00	2.616E+01	1.324E+01	4.430E+02
18.06.30	8.514E+01	5.824E+00	6.003E+00	1.341E+00	2.601E+01	1.476E+01	4.430E+02
18.06.40	8.576E+01	6.780E+00	6.085E+00	1.453E+00	2.598E+01	1.456E+01	4.424E+02
18.06.50	8.547E+01	8.528E+00	7.038E+00	1.432E+00	2.595E+01	1.448E+01	4.405E+02
18.07.00	8.890E+01	7.529E+00	7.286E+00	1.266E+00	2.605E+01	1.388E+01	4.412E+02
18.07.10	8.807E+01	9.235E+00	6.044E+00	1.268E+00	2.602E+01	1.396E+01	4.418E+02
18.07.20	8.814E+01	9.027E+00	6.210E+00	1.289E+00	2.585E+01	1.524E+01	4.418E+02
18.07.30	9.332E+01	7.030E+00	7.700E+00	1.303E+00	2.583E+01	1.560E+01	4.424E+02
18.07.40	9.358E+01	7.113E+00	6.789E+00	1.315E+00	2.580E+01	1.584E+01	4.430E+02
18.07.50	9.213E+01	8.112E+00	7.907E+00	1.353E+00	2.588E+01	1.580E+01	4.436E+02
18.08.00	9.240E+01	7.321E+00	8.569E+00	1.348E+00	2.587E+01	1.624E+01	4.412E+02
18.08.10	9.586E+01	7.987E+00	8.321E+00	1.170E+00	2.568E+01	1.704E+01	4.436E+02
18.08.20	1.017E+02	5.782E+00	8.983E+00	1.296E+00	2.580E+01	1.652E+01	4.418E+02
18.08.30	9.956E+01	7.529E+00	8.280E+00	1.254E+00	2.602E+01	1.496E+01	4.448E+02
18.08.40	8.791E+01	1.085E+01	6.499E+00	1.426E+00	2.610E+01	1.460E+01	4.442E+02
18.08.50	8.830E+01	7.238E+00	5.920E+00	1.354E+00	2.608E+01	1.472E+01	4.424E+02
18.09.00	9.197E+01	7.446E+00	6.210E+00	1.454E+00	2.600E+01	1.596E+01	4.405E+02
18.09.10	9.108E+01	7.820E+00	5.547E+00	1.467E+00	2.592E+01	1.620E+01	4.436E+02
18.09.20	9.583E+01	7.737E+00	4.843E+00	1.699E+00	2.581E+01	1.672E+01	4.442E+02
18.09.30	9.685E+01	1.139E+01	7.990E+00	1.459E+00	2.578E+01	1.476E+01	4.448E+02
18.09.40	9.989E+01	1.064E+01	9.315E+00	1.416E+00	2.595E+01	1.556E+01	4.357E+02
18.09.50	9.797E+01	7.820E+00	9.894E+00	1.172E+00	2.579E+01	1.704E+01	4.448E+02
18.10.00	9.579E+01	6.323E+00	8.569E+00	1.352E+00	2.583E+01	1.716E+01	4.418E+02
18.10.10	9.355E+01	7.945E+00	8.404E+00	1.587E+00	2.585E+01	1.652E+01	4.467E+02
18.10.20	9.078E+01	7.363E+00	7.079E+00	1.602E+00	2.592E+01	1.716E+01	4.393E+02
18.10.30	8.946E+01	7.488E+00	9.190E+00	1.536E+00	2.574E+01	1.736E+01	4.436E+02
18.10.40	9.556E+01	6.739E+00	8.859E+00	1.578E+00	2.571E+01	1.764E+01	4.442E+02
18.10.50	9.494E+01	6.905E+00	9.563E+00	1.394E+00	2.586E+01	1.760E+01	4.418E+02
18.11.00	9.296E+01	8.361E+00	7.245E+00	1.866E+00	2.581E+01	1.748E+01	4.436E+02
18.11.10	9.180E+01	7.155E+00	6.334E+00	1.748E+00	2.583E+01	1.788E+01	4.418E+02
18.11.20	9.233E+01	8.403E+00	6.582E+00	1.476E+00	2.572E+01	1.808E+01	4.436E+02
18.11.30	9.061E+01	7.779E+00	7.741E+00	1.398E+00	2.528E+01	1.924E+01	4.491E+02
18.11.40	8.540E+01	7.280E+00	7.948E+00	2.232E+00	2.511E+01	2.060E+01	4.473E+02
18.11.50	8.461E+01	6.905E+00	7.369E+00	1.878E+00	2.495E+01	2.036E+01	4.399E+02

APPENDIX B

TABLE B3.- Continued

(e) Spiral at WFC

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.18.10	9.216E+01	8.569E+00	8.652E+00		2.793E+01	2.160E+01	1.161E+01
18.18.20	9.210E+01	9.817E+00	8.238E+00		2.776E+01	2.232E+01	3.055E+01
18.18.30	8.154E+01	1.085E+01	7.286E+00		2.713E+01	2.192E+01	7.088E+01
18.18.40	8.118E+01	1.069E+01	8.859E+00		2.659E+01	2.168E+01	1.020E+02
18.18.50	8.636E+01	1.131E+01	9.480E+00		2.642E+01	2.112E+01	1.356E+02
18.19.00	8.847E+01	9.776E+00	7.824E+00		2.589E+01	2.084E+01	1.790E+02
18.19.10	8.906E+01	8.070E+00	6.624E+00		2.560E+01	1.948E+01	2.157E+02
18.19.20	9.784E+01	5.283E+00	6.665E+00		2.564E+01	1.832E+01	2.529E+02
18.19.30	1.093E+02	5.699E+00	8.280E+00		2.569E+01	1.732E+01	2.872E+02
18.19.40	1.167E+02	6.115E+00	6.251E+00		2.554E+01	1.744E+01	3.177E+02
18.19.50	1.133E+02	1.164E+01	8.569E+00		2.543E+01	1.724E+01	3.489E+02
18.20.00	1.063E+02	1.322E+01	8.694E+00		2.546E+01	1.612E+01	3.807E+02
18.20.10	9.989E+01	1.027E+01	9.646E+00		2.521E+01	1.612E+01	4.130E+02
18.20.20	9.599E+01	1.098E+01	8.528E+00		2.489E+01	1.608E+01	4.467E+02
18.20.30	9.289E+01	7.779E+00	9.190E+00		2.452E+01	1.608E+01	4.821E+02
18.20.40	9.154E+01	8.569E+00	8.901E+00		2.446E+01	1.728E+01	5.127E+02
18.20.50	8.801E+01	9.318E+00	8.487E+00		2.428E+01	1.792E+01	5.512E+02
18.21.00	8.784E+01	7.904E+00	8.611E+00		2.389E+01	1.812E+01	5.805E+02
18.21.10	8.824E+01	8.694E+00	9.729E+00		2.347E+01	1.828E+01	6.080E+02
18.21.20	8.563E+01	8.070E+00	8.776E+00		2.304E+01	1.836E+01	6.392E+02
18.21.30	8.566E+01	8.195E+00	9.025E+00		2.285E+01	1.824E+01	6.636E+02
18.21.40	8.725E+01	7.779E+00	8.818E+00		2.275E+01	1.824E+01	6.825E+02
18.21.50	8.563E+01	8.320E+00	9.273E+00		2.243E+01	1.836E+01	7.070E+02
18.22.00	8.642E+01	9.276E+00	9.190E+00		2.207E+01	1.848E+01	7.394E+02
18.22.10	8.487E+01	1.077E+01	9.108E+00		2.180E+01	1.836E+01	7.650E+02
18.22.20	8.675E+01	8.112E+00	8.073E+00		2.186E+01	1.740E+01	7.968E+02
18.22.30	8.560E+01	7.820E+00	7.576E+00		2.170E+01	1.716E+01	8.268E+02
18.22.40	8.741E+01	6.697E+00	9.853E+00		2.137E+01	1.716E+01	8.598E+02
18.22.50	8.857E+01	9.235E+00	9.604E+00		2.114E+01	1.692E+01	8.915E+02
18.23.00	8.982E+01	1.002E+01	8.569E+00		2.088E+01	1.668E+01	9.196E+02
18.23.10	8.900E+01	9.526E+00	9.811E+00		2.063E+01	1.668E+01	9.465E+02
18.23.20	8.556E+01	9.484E+00	1.084E+01		2.036E+01	1.632E+01	9.746E+02
18.23.30	8.616E+01	6.073E+00	9.439E+00		2.030E+01	1.436E+01	1.002E+03
18.23.40	8.421E+01	6.780E+00	1.146E+01		2.005E+01	1.412E+01	1.031E+03
18.23.50	8.012E+01	7.113E+00	1.035E+01		1.983E+01	1.396E+01	1.059E+03
18.24.00	7.959E+01	8.028E+00	9.356E+00		1.964E+01	1.432E+01	1.087E+03
18.24.10	7.695E+01	1.006E+01	9.687E+00		2.006E+01	1.028E+01	1.114E+03
18.24.20	6.448E+01	9.984E+00	9.604E+00		1.969E+01	1.176E+01	1.142E+03
18.24.30	6.454E+01	9.942E+00	1.035E+01		1.961E+01	1.056E+01	1.169E+03
18.24.40	6.339E+01	8.736E+00	1.022E+01		1.934E+01	1.040E+01	1.197E+03
18.24.50	6.355E+01	8.652E+00	7.038E+00		1.930E+01	9.360E+00	1.226E+03
18.25.00	6.019E+01	8.278E+00	6.706E+00		1.897E+01	9.320E+00	1.257E+03
18.25.10	6.098E+01	9.152E+00	6.913E+00		1.857E+01	9.480E+00	1.292E+03
18.25.20	6.187E+01	1.044E+01	6.417E+00		1.831E+01	9.120E+00	1.323E+03
18.25.30	6.088E+01	1.027E+01	6.748E+00		1.807E+01	8.960E+00	1.349E+03
18.25.40	5.834E+01	8.070E+00	5.133E+00		1.779E+01	9.040E+00	1.380E+03
18.25.50	5.910E+01	1.069E+01	6.168E+00		1.738E+01	9.520E+00	1.412E+03
18.26.00	6.306E+01	8.486E+00	7.493E+00		1.722E+01	8.760E+00	1.439E+03
18.26.10	6.022E+01	8.486E+00	7.783E+00		1.695E+01	8.840E+00	1.467E+03
18.26.20	5.817E+01	9.193E+00	8.362E+00		1.669E+01	8.800E+00	1.490E+03
18.26.30	5.979E+01	9.027E+00	8.901E+00		1.651E+01	8.840E+00	1.501E+03
18.26.40	6.118E+01	1.098E+01	7.824E+00		1.680E+01	9.240E+00	1.475E+03

*No data due to instrument malfunction.

APPENDIX B

TABLE B3.- Continued

(f) WFC → L

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.32.30	8.457E+01	8.070E+00	6.210E+00		2.495E+01	1.948E+01	4.405E+02
18.32.40	8.636E+01	8.486E+00	6.913E+00		2.490E+01	1.912E+01	4.412E+02
18.32.50	8.936E+01	7.612E+00	8.114E+00		2.490E+01	1.904E+01	4.405E+02
18.33.00	9.018E+01	9.900E+00	8.073E+00		2.475E+01	1.860E+01	4.387E+02
18.33.10	9.365E+01	9.235E+00	7.203E+00		2.432E+01	1.948E+01	4.418E+02
18.33.20	9.414E+01	9.110E+00	8.155E+00		2.466E+01	1.816E+01	4.442E+02
18.33.30	9.708E+01	1.069E+01	8.859E+00		2.490E+01	1.848E+01	4.393E+02
18.33.40	9.550E+01	1.023E+01	9.604E+00		2.487E+01	1.812E+01	4.424E+02
18.33.50	9.797E+01	8.444E+00	8.487E+00		2.493E+01	1.776E+01	4.399E+02
18.34.00	9.744E+01	1.006E+01	9.563E+00		2.493E+01	1.748E+01	4.430E+02
18.34.10	9.936E+01	8.070E+00	9.108E+00		2.482E+01	1.744E+01	4.424E+02
18.34.20	1.030E+02	9.360E+00	1.018E+01		2.486E+01	1.696E+01	4.424E+02
18.34.30	1.060E+02	8.985E+00	9.273E+00		2.484E+01	1.704E+01	4.418E+02
18.34.40	1.027E+02	1.010E+01	9.356E+00		2.458E+01	1.800E+01	4.405E+02
18.34.50	9.669E+01	9.110E+00	8.818E+00		2.447E+01	1.888E+01	4.387E+02
18.35.00	9.533E+01	7.779E+00	9.522E+00		2.506E+01	1.736E+01	4.393E+02
18.35.10	9.909E+01	8.819E+00	1.047E+01		2.513E+01	1.724E+01	4.405E+02
18.35.20	9.721E+01	7.238E+00	9.811E+00		2.506E+01	1.728E+01	4.460E+02
18.35.30	9.636E+01	7.737E+00	9.273E+00		2.521E+01	1.736E+01	4.412E+02
18.35.40	9.464E+01	9.734E+00	9.025E+00		2.523E+01	1.772E+01	4.393E+02
18.35.50	9.352E+01	1.015E+01	8.776E+00		2.525E+01	1.768E+01	4.405E+02
18.36.00	9.395E+01	1.044E+01	8.694E+00		2.503E+01	1.728E+01	4.430E+02
18.36.10	9.543E+01	7.945E+00	7.824E+00		2.491E+01	1.752E+01	4.424E+02
18.36.20	9.791E+01	7.945E+00	9.977E+00		2.524E+01	1.688E+01	4.399E+02
18.36.30	9.342E+01	8.985E+00	1.051E+01		2.511E+01	1.680E+01	4.424E+02
18.36.40	9.487E+01	9.859E+00	8.859E+00		2.491E+01	1.712E+01	4.430E+02
18.36.50	9.814E+01	1.210E+01	9.604E+00		2.529E+01	1.604E+01	4.387E+02
18.37.00	9.177E+01	8.694E+00	8.694E+00		2.518E+01	1.664E+01	4.393E+02
18.37.10	9.966E+01	1.114E+01	8.445E+00		2.523E+01	1.624E+01	4.387E+02
18.37.20	1.002E+02	7.654E+00	6.665E+00		2.514E+01	1.640E+01	4.448E+02
18.37.30	9.236E+01	7.820E+00	5.589E+00		2.520E+01	1.616E+01	4.412E+02
18.37.40	9.672E+01	8.944E+00	6.168E+00		2.516E+01	1.604E+01	4.442E+02
18.37.50	1.004E+02	1.064E+01	6.334E+00		2.509E+01	1.680E+01	4.412E+02
18.38.00	9.804E+01	6.156E+00	7.493E+00		2.498E+01	1.748E+01	4.399E+02
18.38.10	9.685E+01	5.740E+00	7.493E+00		2.493E+01	1.760E+01	4.418E+02
18.38.20	9.715E+01	5.324E+00	7.659E+00		2.494E+01	1.688E+01	4.424E+02
18.38.30	9.777E+01	7.113E+00	7.079E+00		2.504E+01	1.680E+01	4.369E+02
18.38.40	9.837E+01	8.070E+00	8.776E+00		2.498E+01	1.708E+01	4.393E+02
18.38.50	1.004E+02	7.529E+00	8.901E+00		2.489E+01	1.724E+01	4.418E+02
18.39.00	9.764E+01	9.734E+00	1.076E+01	1.550E+00	2.494E+01	1.700E+01	4.412E+02
18.39.10	9.761E+01	1.098E+01	1.072E+01	1.643E+00	2.499E+01	1.692E+01	4.399E+02
18.39.20	9.992E+01	1.031E+01	1.059E+01	1.759E+00	2.489E+01	1.716E+01	4.405E+02
18.39.30	9.985E+01	1.077E+01	1.142E+01	1.840E+00	2.486E+01	1.732E+01	4.399E+02
18.39.40	9.886E+01	9.568E+00	9.273E+00	1.711E+00	2.486E+01	1.728E+01	4.412E+02
18.39.50	1.003E+02	7.696E+00	9.977E+00	1.575E+00	2.490E+01	1.724E+01	4.405E+02
18.40.00	9.936E+01	8.528E+00	8.487E+00	1.594E+00	2.493E+01	1.704E+01	4.405E+02
18.40.10	1.015E+02	7.321E+00	8.818E+00	1.574E+00	2.497E+01	1.696E+01	4.399E+02
18.40.20	9.804E+01	6.406E+00	8.073E+00	1.475E+00	2.503E+01	1.668E+01	4.399E+02
18.40.30	1.038E+02	9.776E+00	9.646E+00	1.498E+00	2.506E+01	1.680E+01	4.381E+02
18.40.40	1.010E+02	6.198E+00	9.397E+00	1.707E+00	2.507E+01	1.652E+01	4.387E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B3.- Continued

(f) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
18.40.50	1.026E+02	5.366E+00	9.563E+00	1.529E+00	2.507E+01	1.656E+01	4.387E+02
18.41.00	9.942E+01	8.028E+00	8.528E+00	1.648E+00	2.510E+01	1.656E+01	4.387E+02
18.41.10	9.966E+01	9.110E+00	7.452E+00	1.653E+00	2.505E+01	1.684E+01	4.393E+02
18.41.20	1.002E+02	9.484E+00	6.044E+00	1.539E+00	2.501E+01	1.700E+01	4.393E+02
18.41.30	1.016E+02	1.035E+01	6.003E+00	1.587E+00	2.505E+01	1.684E+01	4.387E+02
18.41.40	1.005E+02	1.160E+01	7.286E+00	1.634E+00	2.507E+01	1.652E+01	4.381E+02
18.41.50	9.860E+01	8.902E+00	9.977E+00	1.624E+00	2.510E+01	1.660E+01	4.363E+02
18.42.00	9.665E+01	1.085E+01	1.068E+01	1.726E+00	2.510E+01	1.672E+01	4.363E+02
18.42.10	9.843E+01	9.526E+00	9.190E+00	1.617E+00	2.510E+01	1.668E+01	4.387E+02
18.42.20	9.609E+01	1.160E+01	9.190E+00	1.607E+00	2.512E+01	1.660E+01	4.387E+02
18.42.30	9.847E+01	9.443E+00	8.694E+00	1.569E+00	2.507E+01	1.676E+01	4.381E+02
18.42.40	9.725E+01	7.072E+00	9.480E+00	1.729E+00	2.491E+01	1.716E+01	4.387E+02
18.42.50	9.744E+01	8.736E+00	1.088E+01	1.872E+00	2.482E+01	1.724E+01	4.381E+02
18.43.00	9.777E+01	9.443E+00	9.604E+00	1.677E+00	2.482E+01	1.708E+01	4.399E+02
18.43.10	9.695E+01	8.028E+00	1.035E+01	1.761E+00	2.495E+01	1.704E+01	4.350E+02
18.43.20	9.589E+01	7.404E+00	9.025E+00	1.775E+00	2.495E+01	1.696E+01	4.381E+02
18.43.30	9.593E+01	9.526E+00	7.079E+00	1.601E+00	2.493E+01	1.692E+01	4.393E+02
18.43.40	9.764E+01	1.035E+01	7.741E+00	1.778E+00	2.492E+01	1.692E+01	4.393E+02
18.43.50	9.781E+01	9.942E+00	6.375E+00	1.706E+00	2.487E+01	1.708E+01	4.399E+02
18.44.00	9.781E+01	8.153E+00	6.831E+00	1.635E+00	2.484E+01	1.728E+01	4.369E+02
18.44.10	9.546E+01	9.235E+00	8.445E+00	1.851E+00	2.473E+01	1.764E+01	4.363E+02
18.44.20	8.903E+01	8.777E+00	7.948E+00	1.962E+00	2.459E+01	1.820E+01	4.369E+02
18.44.30	8.652E+01	7.280E+00	8.776E+00	1.823E+00	2.461E+01	1.804E+01	4.381E+02
18.44.40	8.543E+01	8.694E+00	9.108E+00	1.849E+00	2.466E+01	1.764E+01	4.387E+02
18.44.50	8.840E+01	8.195E+00	8.652E+00	1.932E+00	2.467E+01	1.756E+01	4.399E+02
18.45.00	8.870E+01	7.737E+00	7.700E+00	1.784E+00	2.459E+01	1.796E+01	4.387E+02
18.45.10	8.372E+01	8.028E+00	7.162E+00	1.899E+00	2.449E+01	1.828E+01	4.387E+02
18.45.20	8.461E+01	6.988E+00	9.356E+00	1.784E+00	2.436E+01	1.860E+01	4.387E+02
18.45.30	8.563E+01	6.489E+00	9.066E+00	1.772E+00	2.433E+01	1.856E+01	4.399E+02
18.45.40	8.124E+01	7.488E+00	9.853E+00	1.876E+00	2.444E+01	1.836E+01	4.381E+02
18.45.50	8.467E+01	1.023E+01	7.824E+00	1.912E+00	2.448E+01	1.828E+01	4.393E+02
18.46.00	8.131E+01	8.611E+00	8.238E+00	1.825E+00	2.454E+01	1.832E+01	4.393E+02
18.46.10	7.791E+01	7.030E+00	6.292E+00	1.810E+00	2.459E+01	1.836E+01	4.393E+02
18.46.20	7.969E+01	8.028E+00	7.452E+00	1.700E+00	2.463E+01	1.832E+01	4.393E+02
18.46.30	7.995E+01	5.366E+00	8.652E+00	1.798E+00	2.463E+01	1.836E+01	4.387E+02
18.46.40	8.111E+01	5.283E+00	7.038E+00	1.865E+00	2.459E+01	1.840E+01	4.387E+02
18.46.50	7.976E+01	7.529E+00	6.417E+00	1.950E+00	2.459E+01	1.844E+01	4.381E+02
18.47.00	7.972E+01	9.110E+00	5.920E+00	2.146E+00	2.460E+01	1.852E+01	4.375E+02
18.47.10	7.814E+01	6.780E+00	7.079E+00	1.857E+00	2.452E+01	1.856E+01	4.399E+02
18.47.20	7.920E+01	7.945E+00	7.866E+00	1.785E+00	2.452E+01	1.856E+01	4.381E+02
18.47.30	7.771E+01	7.488E+00	9.770E+00	2.028E+00	2.453E+01	1.856E+01	4.387E+02
18.47.40	8.088E+01	7.737E+00	9.729E+00	1.824E+00	2.454E+01	1.864E+01	4.387E+02
18.47.50	8.111E+01	9.609E+00	6.624E+00	1.772E+00	2.453E+01	1.868E+01	4.387E+02
18.48.00	8.160E+01	9.276E+00	6.334E+00	1.956E+00	2.452E+01	1.868E+01	4.381E+02
18.48.10	8.075E+01	6.780E+00	6.210E+00	1.716E+00	2.454E+01	1.872E+01	4.369E+02
18.48.20	7.708E+01	7.321E+00	8.487E+00	1.950E+00	2.452E+01	1.880E+01	4.393E+02
18.48.30	7.854E+01	6.032E+00	6.996E+00	1.898E+00	2.456E+01	1.880E+01	4.387E+02
18.48.40	7.781E+01	8.320E+00	3.850E+00	1.833E+00	2.458E+01	1.880E+01	4.387E+02
18.48.50	7.778E+01	8.611E+00	3.767E+00	1.884E+00	2.455E+01	1.880E+01	4.381E+02
18.49.00	7.844E+01	6.739E+00	6.872E+00	1.942E+00	2.456E+01	1.884E+01	4.363E+02

APPENDIX B

TABLE B3.- Continued

(f) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.49.10	7.629E+01	6.656E+00	7.824E+00	1.888E+00	2.453E+01	1.884E+01	4.375E+02
18.49.20	7.659E+01	9.360E+00	7.369E+00	1.847E+00	2.448E+01	1.888E+01	4.381E+02
18.49.30	7.378E+01	1.123E+01	7.410E+00	2.042E+00	2.445E+01	1.884E+01	4.375E+02
18.49.40	7.728E+01	9.900E+00	6.292E+00	2.108E+00	2.441E+01	1.884E+01	4.399E+02
18.49.50	7.530E+01	9.318E+00	6.748E+00	2.026E+00	2.440E+01	1.884E+01	4.399E+02
18.50.00	7.510E+01	5.616E+00	8.859E+00	1.871E+00	2.441E+01	1.888E+01	4.405E+02
18.50.10	7.817E+01	4.950E+00	8.818E+00	1.819E+00	2.442E+01	1.880E+01	4.387E+02
18.50.20	7.817E+01	7.488E+00	5.630E+00	1.924E+00	2.446E+01	1.880E+01	4.369E+02
18.50.30	7.890E+01	6.032E+00	5.092E+00	1.968E+00	2.444E+01	1.880E+01	4.393E+02
18.50.40	7.814E+01	8.028E+00	5.796E+00	1.924E+00	2.445E+01	1.884E+01	4.399E+02
18.50.50	7.745E+01	8.070E+00	6.210E+00	1.859E+00	2.446E+01	1.888E+01	4.405E+02
18.51.00	7.698E+01	8.860E+00	9.025E+00	1.961E+00	2.448E+01	1.880E+01	4.399E+02
18.51.10	7.550E+01	9.568E+00	9.853E+00	1.833E+00	2.446E+01	1.880E+01	4.399E+02
18.51.20	7.596E+01	8.236E+00	1.068E+01	2.220E+00	2.442E+01	1.884E+01	4.393E+02
18.51.30	7.731E+01	9.276E+00	9.315E+00	2.112E+00	2.440E+01	1.884E+01	4.405E+02
18.51.40	7.494E+01	9.776E+00	7.824E+00	1.733E+00	2.441E+01	1.880E+01	4.405E+02
18.51.50	7.718E+01	7.862E+00	9.273E+00	1.961E+00	2.439E+01	1.884E+01	4.405E+02
18.52.00	7.692E+01	6.947E+00	1.030E+01	1.926E+00	2.437E+01	1.884E+01	4.393E+02
18.52.10	7.629E+01	8.569E+00	7.079E+00	2.062E+00	2.437E+01	1.876E+01	4.399E+02
18.52.20	7.725E+01	1.015E+01	6.334E+00	2.112E+00	2.434E+01	1.876E+01	4.399E+02
18.52.30	7.784E+01	9.651E+00	5.589E+00	2.149E+00	2.424E+01	1.880E+01	4.399E+02
18.52.40	7.504E+01	1.052E+01	5.878E+00	2.141E+00	2.412E+01	1.888E+01	4.405E+02
18.52.50	7.606E+01	1.148E+01	6.375E+00	1.980E+00	2.401E+01	1.896E+01	4.424E+02
18.53.00	7.309E+01	7.862E+00	5.630E+00	2.075E+00	2.402E+01	1.896E+01	4.393E+02
18.53.10	7.398E+01	5.824E+00	6.582E+00		2.403E+01	1.900E+01	4.412E+02
18.53.20	7.362E+01	4.825E+00	6.210E+00		2.406E+01	1.884E+01	4.405E+02
18.53.30	7.570E+01	2.537E+00	7.659E+00		2.407E+01	1.876E+01	4.405E+02
18.53.40	7.642E+01	4.118E+00	6.665E+00		2.408E+01	1.880E+01	4.418E+02
18.53.50	7.388E+01	9.027E+00	8.238E+00		2.411E+01	1.880E+01	4.412E+02
18.54.00	7.385E+01	8.860E+00	6.831E+00		2.418E+01	1.880E+01	4.412E+02
18.54.10	7.494E+01	9.484E+00	7.327E+00		2.415E+01	1.876E+01	4.405E+02
18.54.20	7.491E+01	8.403E+00	8.652E+00		2.416E+01	1.876E+01	4.418E+02
18.54.30	7.662E+01	8.569E+00	8.362E+00		2.418E+01	1.876E+01	4.418E+02
18.54.40	7.593E+01	5.824E+00	6.748E+00		2.414E+01	1.872E+01	4.399E+02
18.54.50	7.520E+01	5.532E+00	5.754E+00		2.411E+01	1.872E+01	4.405E+02
18.55.00	7.362E+01	6.614E+00	6.168E+00		2.416E+01	1.880E+01	4.424E+02
18.55.10	7.438E+01	7.113E+00	6.251E+00		2.416E+01	1.880E+01	4.412E+02
18.55.20	7.580E+01	6.489E+00	5.796E+00		2.415E+01	1.880E+01	4.424E+02
18.55.30	7.560E+01	7.571E+00	4.926E+00		2.403E+01	1.876E+01	4.412E+02
18.55.40	7.679E+01	6.489E+00	5.671E+00		2.390E+01	1.872E+01	4.405E+02
18.55.50	7.570E+01	6.614E+00	5.671E+00		2.380E+01	1.860E+01	4.412E+02
18.56.00	7.811E+01	8.652E+00	5.713E+00		2.376E+01	1.848E+01	4.430E+02
18.56.10	7.712E+01	6.988E+00	7.286E+00		2.381E+01	1.848E+01	4.424E+02
18.56.20	7.959E+01	5.699E+00	8.280E+00		2.384E+01	1.856E+01	4.436E+02
18.56.30	7.824E+01	6.364E+00	9.646E+00		2.380E+01	1.804E+01	4.436E+02
18.56.40	7.883E+01	6.947E+00	8.694E+00		2.378E+01	1.824E+01	4.430E+02
18.56.50	7.939E+01	7.280E+00	9.522E+00		2.382E+01	1.804E+01	4.424E+02
18.57.00	8.002E+01	6.864E+00	9.273E+00		2.384E+01	1.800E+01	4.418E+02
18.57.10	7.748E+01	5.449E+00	8.280E+00		2.383E+01	1.832E+01	4.418E+02
18.57.20	7.900E+01	9.568E+00	1.026E+01		2.385E+01	1.832E+01	4.412E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B3.- Concluded

(f) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.57.30	8.035E+01	9.568E+00	1.155E+01		2.384E+01	1.836E+01	4.412E+02
18.57.40	8.325E+01	8.361E+00	1.097E+01		2.385E+01	1.832E+01	4.412E+02
18.57.50	8.226E+01	7.113E+00	1.113E+01		2.390E+01	1.792E+01	4.418E+02
18.58.00	7.877E+01	5.948E+00	9.646E+00		2.399E+01	1.800E+01	4.430E+02
18.58.10	7.887E+01	4.700E+00	7.907E+00		2.404E+01	1.824E+01	4.418E+02
18.58.20	8.210E+01	7.779E+00	8.487E+00		2.416E+01	1.808E+01	4.412E+02
18.58.30	7.626E+01	5.616E+00	9.977E+00		2.423E+01	1.812E+01	4.405E+02
18.58.40	7.421E+01	7.779E+00	1.076E+01		2.429E+01	1.844E+01	4.405E+02
18.58.50	7.563E+01	9.651E+00	9.729E+00		2.428E+01	1.848E+01	4.412E+02
18.59.00	7.557E+01	9.193E+00	8.031E+00		2.428E+01	1.852E+01	4.412E+02
18.59.10	7.609E+01	9.692E+00	6.665E+00		2.426E+01	1.840E+01	4.412E+02
18.59.20	7.570E+01	9.068E+00	7.534E+00		2.423E+01	1.832E+01	4.412E+02
18.59.30	7.639E+01	1.031E+01	9.936E+00		2.421E+01	1.836E+01	4.399E+02
18.59.40	7.797E+01	9.609E+00	1.063E+01		2.429E+01	1.840E+01	4.393E+02
18.59.50	7.939E+01	7.779E+00	9.273E+00		2.437E+01	1.864E+01	4.412E+02
19.00.00	7.497E+01	9.443E+00	1.051E+01		2.442E+01	1.864E+01	4.405E+02
19.00.10	7.560E+01	7.529E+00	1.059E+01		2.442E+01	1.856E+01	4.418E+02
19.00.20	7.527E+01	8.278E+00	9.232E+00		2.447E+01	1.852E+01	4.369E+02
19.00.30	7.636E+01	8.278E+00	6.334E+00		2.443E+01	1.848E+01	4.405E+02
19.00.40	7.543E+01	8.944E+00	7.038E+00		2.442E+01	1.852E+01	4.387E+02
19.00.50	7.850E+01	7.612E+00	7.410E+00		2.430E+01	1.856E+01	4.424E+02
19.01.00	7.735E+01	7.280E+00	8.859E+00		2.430E+01	1.848E+01	4.405E+02
19.01.10	7.725E+01	5.824E+00	7.990E+00		2.432E+01	1.848E+01	4.399E+02
19.01.20	7.903E+01	7.404E+00	5.713E+00		2.427E+01	1.832E+01	4.405E+02
19.01.30	7.745E+01	7.072E+00	5.175E+00		2.416E+01	1.804E+01	4.412E+02
19.01.40	7.728E+01	8.528E+00	5.092E+00		2.413E+01	1.792E+01	4.424E+02
19.01.50	7.669E+01	5.990E+00	5.092E+00		2.420E+01	1.772E+01	4.387E+02
19.02.00	7.675E+01	8.278E+00	6.955E+00		2.425E+01	1.724E+01	4.393E+02
19.02.10	7.695E+01	5.033E+00	8.031E+00		2.424E+01	1.708E+01	4.412E+02
19.02.20	7.887E+01	6.656E+00	6.624E+00		2.423E+01	1.724E+01	4.405E+02
19.02.30	7.708E+01	7.820E+00	7.700E+00		2.428E+01	1.716E+01	4.393E+02
19.02.40	8.032E+01	5.824E+00	9.066E+00		2.421E+01	1.748E+01	4.412E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B4.- AIRCRAFT DATA FOR REMOTE SENSOR CALIBRATION

EXPERIMENT ON JULY 19, 1978

(a) Spiral at B

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
16.36.20	9.018E+01	9.068E+00	2.884E-01		2.702E+01	1.820E+01	9.044E+01
16.36.30	8.794E+01	9.318E+00	2.548E-01		2.678E+01	1.916E+01	1.044E+02
16.36.40	8.368E+01	9.110E+00	2.786E-01		2.624E+01	1.944E+01	1.558E+02
16.36.50	8.190E+01	9.859E+00	2.464E-01		2.562E+01	1.932E+01	1.986E+02
16.37.00	9.170E+01	1.102E+01	2.632E-01		2.559E+01	1.884E+01	2.126E+02
16.37.10	8.349E+01	1.110E+01	2.856E-01		2.539E+01	1.880E+01	2.419E+02
16.37.20	8.434E+01	9.068E+00	2.912E-01		2.508E+01	1.844E+01	2.701E+02
16.37.30	8.391E+01	6.614E+00	2.996E-01		2.469E+01	1.872E+01	3.000E+02
16.37.40	8.259E+01	9.776E+00	3.122E-01		2.453E+01	1.832E+01	3.244E+02
16.37.50	8.352E+01	8.569E+00	3.444E-01		2.443E+01	1.728E+01	3.501E+02
16.38.00	8.355E+01	8.528E+00	3.514E-01		2.422E+01	1.724E+01	3.794E+02
16.38.10	8.391E+01	9.609E+00	3.486E-01		2.386E+01	1.740E+01	4.033E+02
16.38.20	8.424E+01	9.651E+00	2.940E-01		2.387E+01	1.676E+01	4.259E+02
16.38.30	8.349E+01	9.609E+00	2.464E-01		2.347E+01	1.800E+01	4.515E+02
16.38.40	8.259E+01	1.064E+01	2.450E-01		2.328E+01	1.700E+01	4.766E+02
16.38.50	9.352E+01	1.060E+01	2.856E-01		2.312E+01	1.780E+01	5.004E+02
16.39.00	8.071E+01	9.318E+00	3.164E-01		2.289E+01	1.772E+01	5.224E+02
16.39.10	8.210E+01	9.776E+00	2.674E-01		2.240E+01	1.884E+01	5.487E+02
16.39.20	7.636E+01	1.027E+01	2.716E-01		2.219E+01	1.868E+01	5.768E+02
16.39.30	7.632E+01	8.028E+00	3.150E-01		2.198E+01	1.728E+01	6.049E+02
16.39.40	8.134E+01	8.153E+00	2.618E-01		2.197E+01	1.644E+01	6.269E+02
16.39.50	8.834E+01	7.446E+00	2.366E-01		2.203E+01	1.520E+01	6.526E+02
16.40.00	8.827E+01	7.696E+00	2.744E-01		2.182E+01	1.360E+01	6.795E+02
16.40.10	8.118E+01	9.318E+00	2.842E-01		2.163E+01	1.848E+01	6.978E+02
16.40.20	8.174E+01	7.654E+00	2.842E-01		2.225E+01	1.204E+01	7.168E+02
16.40.30	9.005E+01	8.611E+00	3.094E-01		2.218E+01	1.096E+01	7.479E+02
16.40.40	8.504E+01	8.736E+00	3.024E-01		2.196E+01	1.064E+01	7.809E+02
16.40.50	8.329E+01	8.611E+00	3.066E-01		2.158E+01	1.076E+01	8.121E+02
16.41.00	8.507E+01	9.235E+00	2.674E-01		2.134E+01	1.068E+01	8.371E+02
16.41.10	8.514E+01	9.942E+00	2.548E-01		2.122E+01	1.036E+01	8.591E+02
16.41.20	8.484E+01	1.010E+01	2.478E-01		2.096E+01	1.028E+01	8.842E+02
16.41.30	8.685E+01	9.900E+00	2.646E-01		2.075E+01	1.020E+01	9.062E+02
16.41.40	8.500E+01	9.027E+00	3.234E-01		2.052E+01	9.760E+00	9.368E+02
16.41.50	8.510E+01	9.027E+00	3.696E-01		2.030E+01	9.240E+00	9.716E+02
16.42.00	8.787E+01	8.777E+00	3.682E-01		2.014E+01	8.880E+00	9.979E+02
16.42.10	8.431E+01	7.238E+00	3.150E-01		2.001E+01	9.400E+00	1.015E+03
16.42.20	7.900E+01	5.948E+00	2.926E-01		1.982E+01	8.760E+00	1.046E+03
16.42.30	7.629E+01	8.153E+00	2.800E-01		1.963E+01	8.680E+00	1.066E+03
16.42.40	7.557E+01	1.102E+01	2.604E-01		1.948E+01	9.360E+00	1.079E+03
16.42.50	7.656E+01	9.401E+00	2.814E-01		1.935E+01	9.120E+00	1.101E+03
16.43.00	7.405E+01	8.569E+00	3.276E-01		1.915E+01	8.960E+00	1.126E+03
16.43.10	7.170E+01	8.611E+00	3.164E-01		1.901E+01	9.200E+00	1.147E+03
16.43.20	7.319E+01	7.904E+00	2.912E-01		1.881E+01	8.920E+00	1.170E+03
16.43.30	7.359E+01	9.651E+00	2.856E-01		1.861E+01	9.200E+00	1.192E+03
16.43.40	7.405E+01	7.238E+00	3.010E-01		1.838E+01	1.000E+01	1.213E+03
16.43.50	7.342E+01	7.196E+00	2.730E-01		1.816E+01	9.800E+00	1.237E+03
16.44.00	7.586E+01	9.776E+00	2.590E-01		1.793E+01	9.960E+00	1.261E+03
16.44.10	7.619E+01	9.900E+00	2.128E-01		1.769E+01	9.880E+00	1.286E+03
16.44.20	7.431E+01	1.006E+01	2.338E-01		1.746E+01	1.036E+01	1.307E+03
16.44.30	7.596E+01	1.019E+01	2.786E-01		1.728E+01	1.048E+01	1.327E+03

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B4.- Continued

(a) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
16.44.40	7.794E+01	9.484E+00	2.604E-01		1.705E+01	1.044E+01	1.350E+03
16.44.50	7.698E+01	8.569E+00	2.828E-01		1.678E+01	1.044E+01	1.376E+03
16.45.00	7.804E+01	9.609E+00	2.954E-01		1.651E+01	1.048E+01	1.402E+03
16.45.10	7.642E+01	8.569E+00	2.856E-01		1.633E+01	1.048E+01	1.427E+03
16.45.20	7.359E+01	9.235E+00	2.786E-01		1.618E+01	1.036E+01	1.453E+03
16.45.30	7.048E+01	9.318E+00	2.590E-01		1.602E+01	1.008E+01	1.480E+03
16.45.40	6.860E+01	8.320E+00	2.618E-01		1.578E+01	1.000E+01	1.506E+03
16.45.50	6.877E+01	8.777E+00	2.604E-01		1.552E+01	9.840E+00	1.533E+03
16.46.00	6.705E+01	9.276E+00	1.708E-01		1.528E+01	9.480E+00	1.563E+03
16.46.10	6.718E+01	8.361E+00	1.848E-01		1.499E+01	9.400E+00	1.591E+03
16.46.20	6.613E+01	7.820E+00	1.750E-01		1.476E+01	9.160E+00	1.618E+03
16.46.30	6.695E+01	8.902E+00	2.030E-01		1.466E+01	8.920E+00	1.638E+03
16.46.40	6.563E+01	9.193E+00	2.352E-01		1.448E+01	9.320E+00	1.662E+03
16.46.50	6.761E+01	7.488E+00	2.226E-01		1.424E+01	9.400E+00	1.687E+03
16.47.00	6.662E+01	6.739E+00	2.590E-01		1.391E+01	9.360E+00	1.716E+03
16.47.10	6.807E+01	8.944E+00	2.240E-01		1.368E+01	9.320E+00	1.739E+03
16.47.20	6.817E+01	7.363E+00	2.324E-01		1.348E+01	9.120E+00	1.763E+03
16.47.30	6.880E+01	7.030E+00	2.198E-01		1.326E+01	8.920E+00	1.789E+03
16.47.40	6.804E+01	9.068E+00	2.828E-01		1.304E+01	9.000E+00	1.820E+03
16.47.50	6.778E+01	1.031E+01	2.576E-01		1.343E+01	7.280E+00	1.851E+03
16.48.00	6.514E+01	9.526E+00	2.002E-01		1.464E+01	1.720E+00	1.887E+03
16.48.10	6.118E+01	7.820E+00	2.114E-01		1.512E+01	2.440E+00	1.923E+03
16.48.20	5.666E+01	7.820E+00	2.758E-01		1.513E+01	2.040E+00	1.954E+03
16.48.30	5.900E+01	8.611E+00	2.688E-01		1.515E+01	3.480E+00	1.980E+03
16.48.40	5.504E+01	8.819E+00	2.968E-01		1.526E+01	6.320E+00	2.003E+03
16.48.50	5.428E+01	7.987E+00	2.338E-01		1.520E+01	8.680E+00	2.025E+03
16.49.00	5.415E+01	8.486E+00	1.946E-01		1.506E+01	9.480E+00	2.048E+03
16.49.10	5.438E+01	7.820E+00	2.310E-01		1.496E+01	1.036E+01	2.070E+03
16.49.20	5.755E+01	9.110E+00	2.002E-01		1.492E+01	1.328E+01	2.094E+03
16.49.30	5.887E+01	1.048E+01	2.058E-01		1.486E+01	1.520E+01	2.117E+03
16.49.40	5.709E+01	1.040E+01	2.436E-01		1.474E+01	1.644E+01	2.140E+03
16.49.50	5.844E+01	9.401E+00	2.618E-01		1.469E+01	1.724E+01	2.166E+03
16.50.00	6.329E+01	8.444E+00	2.394E-01		1.487E+01	1.784E+01	2.191E+03
16.50.10	6.454E+01	8.403E+00	2.254E-01		1.485E+01	1.824E+01	2.217E+03
16.50.20	6.072E+01	8.902E+00	2.184E-01		1.483E+01	1.848E+01	2.241E+03
16.50.30	5.880E+01	8.652E+00	2.016E-01		1.484E+01	1.868E+01	2.268E+03
16.50.40	5.841E+01	8.944E+00	2.268E-01		1.502E+01	1.880E+01	2.298E+03
16.50.50	6.200E+01	8.860E+00	2.282E-01		1.490E+01	1.824E+01	2.326E+03
16.51.00	5.115E+01	8.777E+00	2.660E-01		1.471E+01	1.656E+01	2.354E+03
16.51.10	4.808E+01	8.528E+00	2.380E-01		1.450E+01	1.600E+01	2.379E+03
16.51.20	4.794E+01	9.276E+00	2.954E-01		1.423E+01	1.532E+01	2.407E+03
16.51.30	4.369E+01	8.320E+00	2.828E-01		1.398E+01	1.608E+01	2.436E+03
16.51.40	4.339E+01	9.817E+00	3.178E-01		1.374E+01	1.620E+01	2.461E+03
16.51.50	4.329E+01	7.862E+00	3.220E-01		1.347E+01	1.620E+01	2.487E+03
16.52.00	4.451E+01	7.945E+00	2.870E-01		1.324E+01	1.624E+01	2.512E+03
16.52.10	4.200E+01	9.193E+00	2.786E-01		1.306E+01	1.624E+01	2.533E+03
16.52.20	4.448E+01	9.235E+00	2.506E-01		1.285E+01	1.628E+01	2.556E+03
16.52.30	4.293E+01	9.984E+00	2.702E-01		1.264E+01	1.632E+01	2.578E+03
16.52.40	4.385E+01	1.056E+01	3.178E-01		1.248E+01	1.636E+01	2.597E+03
16.52.50	4.339E+01	1.073E+01	3.164E-01		1.227E+01	1.636E+01	2.619E+03

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B4.- Continued

(a) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
16.53.00	4.524E+01	9.360E+00	2.982E-01		1.199E+01	-1.640E+01	2.647E+03
16.53.10	4.227E+01	9.235E+00	2.786E-01		1.167E+01	-1.644E+01	2.678E+03
16.53.20	4.200E+01	1.056E+01	3.150E-01		1.138E+01	-1.636E+01	2.705E+03
16.53.30	4.111E+01	1.010E+01	3.248E-01		1.111E+01	-1.640E+01	2.734E+03
16.53.40	4.200E+01	1.052E+01	3.136E-01		1.083E+01	-1.668E+01	2.762E+03
16.53.50	4.270E+01	1.023E+01	3.430E-01		1.049E+01	-1.696E+01	2.794E+03
16.54.00	4.138E+01	1.085E+01	2.940E-01		1.012E+01	-1.720E+01	2.826E+03
16.54.10	4.092E+01	9.401E+00	2.660E-01		9.845E+00	-1.764E+01	2.857E+03
16.54.20	4.286E+01	9.068E+00	2.464E-01		9.685E+00	-1.848E+01	2.886E+03
16.54.30	4.286E+01	9.776E+00	2.338E-01		9.565E+00	-1.904E+01	2.913E+03
16.54.40	4.537E+01	9.859E+00	2.282E-01		9.505E+00	-1.944E+01	2.937E+03
16.54.50	4.336E+01	7.030E+00	2.534E-01		9.580E+00	-1.972E+01	2.958E+03
16.55.00	4.488E+01	9.193E+00	2.828E-01		9.795E+00	-1.992E+01	2.939E+03

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B4.- Continued

(b) Leg B → C

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
16.58.10	4.877E+01	1.060E+01	9.149E+00		1.526E+01	-1.548E+01	2.341E+03
16.58.20	5.016E+01	9.068E+00	8.776E+00		1.520E+01	-1.604E+01	2.343E+03
16.58.30	5.194E+01	9.568E+00	8.901E+00		1.508E+01	-1.596E+01	2.346E+03
16.58.40	4.926E+01	1.019E+01	8.859E+00		1.503E+01	-1.500E+01	2.344E+03
16.58.50	4.811E+01	9.484E+00	8.652E+00		1.499E+01	-1.496E+01	2.345E+03
16.59.00	4.610E+01	8.153E+00	8.238E+00		1.489E+01	-1.572E+01	2.347E+03
16.59.10	4.986E+01	8.528E+00	8.073E+00		1.488E+01	-1.656E+01	2.344E+03
16.59.20	5.454E+01	9.859E+00	8.031E+00		1.488E+01	-1.804E+01	2.346E+03
16.59.30	5.408E+01	8.195E+00	8.155E+00		1.487E+01	-1.816E+01	2.347E+03
16.59.40	5.520E+01	8.652E+00	8.238E+00		1.488E+01	-1.712E+01	2.345E+03
16.59.50	5.342E+01	9.484E+00	7.369E+00		1.488E+01	-1.724E+01	2.348E+03
17.00.00	5.497E+01	8.777E+00	7.866E+00		1.492E+01	-1.760E+01	2.348E+03
17.00.10	5.405E+01	8.944E+00	8.404E+00		1.497E+01	-1.720E+01	2.345E+03
17.00.20	1.657E+02	2.579E+01	2.695E+01		2.604E+01	-9.168E+01	3.724E+03
17.00.30	5.247E+01	8.611E+00	8.073E+00		1.489E+01	-1.664E+01	2.349E+03
17.00.40	5.593E+01	8.985E+00	6.458E+00		1.498E+01	-1.692E+01	2.344E+03
17.00.50	5.289E+01	9.193E+00	7.534E+00		1.499E+01	-1.716E+01	2.346E+03
17.01.00	5.425E+01	1.010E+01	8.197E+00		1.500E+01	-1.700E+01	2.347E+03
17.01.10	5.451E+01	1.168E+01	7.286E+00		1.506E+01	-1.772E+01	2.345E+03
17.01.20	5.379E+01	9.484E+00	6.541E+00		1.509E+01	-1.840E+01	2.345E+03
17.01.30	5.441E+01	8.819E+00	6.417E+00		1.509E+01	-1.884E+01	2.345E+03
17.01.40	5.709E+01	8.486E+00	6.085E+00		1.511E+01	-1.940E+01	2.345E+03
17.01.50	5.979E+01	8.486E+00	6.872E+00		1.512E+01	-1.968E+01	2.345E+03
17.02.00	5.834E+01	8.777E+00	7.493E+00		1.515E+01	-1.996E+01	2.344E+03
17.02.10	5.870E+01	7.404E+00	8.031E+00		1.514E+01	-1.996E+01	2.344E+03
17.02.20	5.428E+01	8.528E+00	7.741E+00		1.508E+01	-1.920E+01	2.345E+03
17.02.30	5.316E+01	8.112E+00	6.541E+00		1.502E+01	-1.652E+01	2.345E+03
17.02.40	5.412E+01	7.696E+00	7.079E+00		1.501E+01	-1.540E+01	2.345E+03
17.02.50	5.124E+01	7.862E+00	7.576E+00		1.503E+01	-1.564E+01	2.343E+03
17.03.00	4.854E+01	8.320E+00	8.280E+00		1.503E+01	-1.628E+01	2.343E+03
17.03.10	4.824E+01	1.035E+01	7.203E+00		1.501E+01	-1.672E+01	2.344E+03
17.03.20	5.029E+01	9.318E+00	7.162E+00		1.502E+01	-1.688E+01	2.342E+03
17.03.30	4.936E+01	7.904E+00	7.907E+00		1.502E+01	-1.708E+01	2.342E+03
17.03.40	4.837E+01	8.153E+00	7.990E+00		1.502E+01	-1.728E+01	2.342E+03
17.03.50	4.851E+01	7.654E+00	7.203E+00		1.501E+01	-1.736E+01	2.342E+03
17.04.00	4.616E+01	7.529E+00	7.576E+00		1.500E+01	-1.700E+01	2.343E+03
17.04.10	4.629E+01	8.652E+00	7.866E+00		1.496E+01	-1.664E+01	2.344E+03
17.04.20	4.781E+01	1.010E+01	8.445E+00		1.497E+01	-1.664E+01	2.344E+03
17.04.30	4.966E+01	8.236E+00	7.576E+00		1.498E+01	-1.672E+01	2.344E+03
17.04.40	4.831E+01	7.696E+00	8.776E+00		1.497E+01	-1.676E+01	2.345E+03
17.04.50	4.867E+01	8.736E+00	8.114E+00		1.497E+01	-1.676E+01	2.345E+03
17.05.00	4.933E+01	9.360E+00	8.073E+00		1.496E+01	-1.688E+01	2.346E+03
17.05.10	4.867E+01	8.694E+00	8.321E+00		1.497E+01	-1.692E+01	2.346E+03
17.05.20	4.732E+01	8.652E+00	8.197E+00		1.498E+01	-1.676E+01	2.345E+03
17.05.30	4.870E+01	1.052E+01	6.831E+00		1.500E+01	-1.648E+01	2.345E+03
17.05.40	4.808E+01	9.443E+00	8.280E+00		1.502E+01	-1.644E+01	2.345E+03
17.05.50	4.870E+01	1.010E+01	9.563E+00		1.501E+01	-1.640E+01	2.345E+03
17.06.00	4.900E+01	8.944E+00	8.735E+00		1.509E+01	-1.680E+01	2.342E+03
17.06.10	4.907E+01	8.569E+00	6.706E+00		1.511E+01	-1.728E+01	2.343E+03
17.06.20	4.712E+01	7.987E+00	7.162E+00		1.507E+01	-1.720E+01	2.345E+03
17.06.30	4.841E+01	8.902E+00	7.990E+00		1.510E+01	-1.652E+01	2.344E+03
17.06.40	4.841E+01	9.193E+00	8.735E+00		1.514E+01	-1.616E+01	2.342E+03
17.06.50	4.979E+01	8.902E+00	7.245E+00		1.515E+01	-1.612E+01	2.342E+03
17.07.00	4.936E+01	1.006E+01	6.458E+00		1.513E+01	-1.676E+01	2.342E+03
17.07.10	5.002E+01	9.276E+00	6.624E+00		1.497E+01	-1.704E+01	2.344E+03
17.07.20	4.860E+01	1.069E+01	6.292E+00		1.488E+01	-1.732E+01	2.342E+03
17.07.30	4.653E+01	1.023E+01	6.706E+00		1.497E+01	-1.780E+01	2.298E+03

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B4.- Continued

(c) Leg C → A.

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
17.09.30	6.811E+01	1.098E+01	8.238E+00		1.612E+01	9.920E+00	1.454E+03
17.09.40	7.484E+01	1.056E+01	9.397E+00		1.605E+01	1.000E+01	1.455E+03
17.09.50	7.309E+01	1.214E+01	9.894E+00		1.586E+01	9.880E+00	1.468E+03
17.10.00	7.461E+01	1.010E+01	9.480E+00		1.627E+01	1.000E+01	1.439E+03
17.10.10	7.636E+01	1.081E+01	8.735E+00		1.639E+01	1.004E+01	1.434E+03
17.10.20	7.629E+01	1.006E+01	9.025E+00		1.634E+01	1.008E+01	1.437E+03
17.10.30	7.731E+01	8.902E+00	8.942E+00		1.629E+01	1.012E+01	1.437E+03
17.10.40	7.636E+01	1.040E+01	8.818E+00		1.626E+01	1.016E+01	1.439E+03
17.10.50	7.824E+01	9.235E+00	7.534E+00		1.622E+01	8.960E+00	1.455E+03
17.11.00	7.669E+01	7.529E+00	8.859E+00		1.622E+01	1.004E+01	1.441E+03
17.11.10	7.682E+01	8.195E+00	8.031E+00		1.623E+01	9.960E+00	1.439E+03
17.11.20	7.388E+01	1.023E+01	7.038E+00		1.617E+01	9.960E+00	1.443E+03
17.11.30	7.553E+01	7.612E+00	6.292E+00		1.622E+01	1.000E+01	1.441E+03
17.11.40	7.425E+01	9.360E+00	7.907E+00		1.626E+01	9.960E+00	1.440E+03
17.11.50	7.500E+01	1.081E+01	9.273E+00		1.632E+01	1.000E+01	1.439E+03
17.12.00	7.517E+01	1.056E+01	1.055E+01		1.636E+01	1.000E+01	1.438E+03
17.12.10	7.550E+01	1.069E+01	1.101E+01		1.639E+01	1.004E+01	1.437E+03
17.12.20	7.817E+01	1.098E+01	9.646E+00		1.641E+01	1.004E+01	1.436E+03
17.12.30	7.484E+01	8.320E+00	7.990E+00		1.643E+01	1.008E+01	1.435E+03
17.12.40	7.659E+01	8.195E+00	6.789E+00		1.646E+01	1.008E+01	1.435E+03
17.12.50	7.580E+01	9.942E+00	7.452E+00		1.644E+01	1.008E+01	1.436E+03
17.13.00	7.764E+01	9.692E+00	8.735E+00		1.642E+01	1.008E+01	1.436E+03
17.13.10	7.586E+01	1.006E+01	8.155E+00		1.640E+01	1.012E+01	1.437E+03
17.13.20	7.596E+01	9.110E+00	8.694E+00		1.639E+01	1.012E+01	1.438E+03
17.13.30	7.689E+01	9.276E+00	9.190E+00		1.640E+01	1.016E+01	1.438E+03
17.13.40	7.596E+01	8.985E+00	9.936E+00		1.644E+01	1.012E+01	1.437E+03
17.13.50	7.830E+01	7.404E+00	8.901E+00		1.645E+01	1.012E+01	1.437E+03
17.14.00	7.748E+01	6.032E+00	1.022E+01		1.644E+01	1.012E+01	1.437E+03
17.14.10	7.679E+01	8.444E+00	9.108E+00		1.646E+01	1.008E+01	1.437E+03
17.14.20	7.778E+01	9.235E+00	8.031E+00		1.647E+01	1.012E+01	1.436E+03
17.14.30	7.784E+01	7.488E+00	7.120E+00		1.644E+01	1.016E+01	1.437E+03
17.14.40	7.702E+01	7.945E+00	6.624E+00		1.647E+01	1.012E+01	1.436E+03
17.14.50	7.913E+01	8.278E+00	8.652E+00		1.647E+01	1.012E+01	1.436E+03
17.15.00	7.656E+01	8.320E+00	8.942E+00		1.650E+01	1.008E+01	1.434E+03
17.15.10	7.847E+01	8.694E+00	9.811E+00		1.651E+01	1.008E+01	1.434E+03
17.15.20	7.656E+01	8.694E+00	9.853E+00		1.650E+01	1.008E+01	1.437E+03
17.15.30	7.639E+01	6.323E+00	8.321E+00		1.649E+01	1.008E+01	1.436E+03
17.15.40	7.398E+01	7.238E+00	8.776E+00		1.650E+01	1.008E+01	1.437E+03
17.15.50	7.570E+01	7.571E+00	7.948E+00		1.652E+01	1.008E+01	1.436E+03
17.16.00	7.797E+01	7.238E+00	6.665E+00		1.652E+01	1.016E+01	1.437E+03
17.16.10	7.642E+01	9.443E+00	7.907E+00		1.651E+01	1.012E+01	1.436E+03
17.16.20	7.731E+01	1.060E+01	8.445E+00		1.648E+01	1.016E+01	1.436E+03
17.16.30	7.784E+01	9.360E+00	9.811E+00		1.647E+01	1.016E+01	1.436E+03
17.16.40	7.962E+01	7.696E+00	9.894E+00		1.649E+01	1.012E+01	1.434E+03
17.16.50	7.824E+01	7.571E+00	8.983E+00		1.645E+01	1.016E+01	1.437E+03
17.17.00	7.781E+01	1.006E+01	8.155E+00		1.640E+01	1.012E+01	1.439E+03
17.17.10	7.751E+01	7.820E+00	7.079E+00		1.648E+01	1.016E+01	1.434E+03
17.17.20	7.695E+01	8.902E+00	6.955E+00		1.644E+01	1.020E+01	1.438E+03
17.17.30	7.817E+01	7.987E+00	7.741E+00		1.644E+01	1.024E+01	1.438E+03
17.17.40	8.075E+01	8.070E+00	7.576E+00		1.646E+01	1.032E+01	1.436E+03

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B4.- Continued

(c) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
17.17.50	7.745E+01	7.488E+00	7.327E+00		1.647E+01	1.024E+01	1.436E+03
17.18.00	7.741E+01	8.819E+00	5.671E+00		1.645E+01	1.024E+01	1.438E+03
17.18.10	7.906E+01	8.278E+00	4.843E+00		1.647E+01	1.036E+01	1.438E+03
17.18.20	7.533E+01	7.446E+00	6.665E+00		1.649E+01	1.044E+01	1.438E+03
17.18.30	7.745E+01	9.526E+00	8.155E+00		1.655E+01	1.048E+01	1.437E+03
17.18.40	7.659E+01	9.318E+00	8.114E+00		1.660E+01	1.060E+01	1.440E+03
17.18.50	7.672E+01	9.193E+00	8.031E+00		1.655E+01	1.060E+01	1.439E+03
17.19.00	7.689E+01	1.077E+01	8.859E+00		1.668E+01	1.056E+01	1.438E+03
17.19.10	7.207E+01	1.098E+01	9.190E+00		1.674E+01	1.052E+01	1.437E+03
17.19.20	7.184E+01	9.859E+00	8.362E+00		1.666E+01	1.060E+01	1.438E+03
17.19.30	7.177E+01	1.048E+01	7.866E+00		1.659E+01	1.056E+01	1.437E+03
17.19.40	7.718E+01	9.318E+00	8.155E+00		1.653E+01	1.052E+01	1.439E+03
17.19.50	7.438E+01	7.779E+00	6.955E+00		1.645E+01	1.036E+01	1.440E+03
17.20.00	7.642E+01	7.862E+00	7.327E+00		1.645E+01	1.040E+01	1.439E+03
17.20.10	7.580E+01	7.529E+00	6.706E+00		1.655E+01	1.084E+01	1.440E+03
17.20.20	7.550E+01	7.612E+00	8.694E+00		1.652E+01	1.080E+01	1.439E+03
17.20.30	7.484E+01	8.486E+00	8.197E+00		1.649E+01	1.040E+01	1.438E+03
17.20.40	7.741E+01	7.280E+00	7.534E+00		1.650E+01	1.048E+01	1.438E+03
17.20.50	7.814E+01	7.737E+00	8.528E+00		1.648E+01	1.028E+01	1.438E+03
17.21.00	7.801E+01	1.035E+01	8.031E+00		1.650E+01	9.760E+00	1.437E+03
17.21.10	7.573E+01	9.734E+00	7.659E+00		1.661E+01	1.040E+01	1.437E+03
17.21.20	7.722E+01	7.446E+00	7.327E+00		1.664E+01	1.036E+01	1.438E+03
17.21.30	7.560E+01	8.195E+00	6.003E+00		1.660E+01	9.920E+00	1.438E+03
17.21.40	7.738E+01	8.236E+00	5.547E+00		1.661E+01	9.920E+00	1.437E+03
17.21.50	7.520E+01	8.444E+00	6.168E+00		1.666E+01	9.920E+00	1.436E+03
17.22.00	7.500E+01	8.902E+00	6.292E+00		1.678E+01	1.024E+01	1.437E+03
17.22.10	7.461E+01	6.822E+00	6.499E+00		1.674E+01	1.032E+01	1.436E+03
17.22.20	7.609E+01	7.862E+00	6.665E+00		1.666E+01	1.100E+01	1.437E+03
17.22.30	7.306E+01	1.027E+01	5.961E+00		1.656E+01	1.164E+01	1.434E+03
17.22.40	7.269E+01	9.734E+00	5.713E+00		1.650E+01	1.112E+01	1.435E+03
17.22.50	7.273E+01	8.361E+00	6.499E+00		1.651E+01	1.032E+01	1.439E+03
17.23.00	7.547E+01	7.862E+00	6.665E+00		1.628E+01	1.000E+01	1.441E+03

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B4.- Continued

(d) Leg A → C

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
17.25.00	8.045E+01	9.568E+00	7.079E+00		2.082E+01	1.552E+01	8.671E+02
17.25.10	7.966E+01	1.010E+01	7.990E+00		2.090E+01	1.636E+01	8.500E+02
17.25.20	8.048E+01	7.862E+00	8.404E+00		2.103E+01	1.604E+01	8.390E+02
17.25.30	8.276E+01	8.777E+00	8.735E+00		2.127E+01	1.532E+01	8.261E+02
17.25.40	8.015E+01	9.110E+00	9.066E+00		2.103E+01	1.592E+01	8.323E+02
17.25.50	8.523E+01	8.403E+00	8.569E+00		2.103E+01	1.572E+01	8.304E+02
17.26.00	8.764E+01	8.694E+00	9.273E+00		2.110E+01	1.508E+01	8.310E+02
17.26.10	8.646E+01	7.321E+00	1.076E+01		2.089E+01	1.696E+01	8.341E+02
17.26.20	8.266E+01	8.278E+00	1.059E+01		2.085E+01	1.704E+01	8.304E+02
17.26.30	8.504E+01	9.776E+00	8.487E+00		2.112E+01	1.540E+01	8.237E+02
17.26.40	8.616E+01	9.734E+00	7.162E+00		2.087E+01	1.580E+01	8.341E+02
17.26.50	8.438E+01	6.947E+00	6.831E+00		2.104E+01	1.468E+01	8.323E+02
17.27.00	8.474E+01	8.444E+00	6.872E+00		2.104E+01	1.356E+01	8.292E+02
17.27.10	8.500E+01	8.028E+00	7.245E+00		2.060E+01	1.784E+01	8.298E+02
17.27.20	8.141E+01	8.195E+00	7.245E+00		2.055E+01	1.656E+01	8.341E+02
17.27.30	7.916E+01	9.484E+00	6.541E+00		2.086E+01	1.408E+01	8.384E+02
17.27.40	8.217E+01	8.652E+00	5.920E+00		2.099E+01	1.448E+01	8.310E+02
17.27.50	8.547E+01	8.112E+00	5.506E+00		2.102E+01	1.360E+01	8.341E+02
17.28.00	8.715E+01	7.488E+00	7.079E+00		2.066E+01	1.568E+01	8.316E+02
17.28.10	8.547E+01	1.002E+01	7.038E+00		2.084E+01	1.396E+01	8.298E+02
17.28.20	8.652E+01	1.031E+01	5.133E+00		2.066E+01	1.592E+01	8.359E+02
17.28.30	8.203E+01	9.734E+00	5.630E+00		2.105E+01	1.464E+01	8.310E+02
17.28.40	8.537E+01	1.119E+01	5.547E+00		2.123E+01	1.192E+01	8.323E+02
17.28.50	8.850E+01	1.052E+01	5.837E+00		2.160E+01	1.116E+01	8.323E+02
17.29.00	8.824E+01	7.404E+00	4.761E+00		2.172E+01	1.044E+01	8.329E+02
17.29.10	8.791E+01	7.238E+00	4.595E+00		2.173E+01	1.048E+01	8.329E+02
17.29.20	8.814E+01	9.152E+00	6.210E+00		2.172E+01	1.052E+01	8.310E+02
17.29.30	8.844E+01	7.072E+00	8.652E+00		2.170E+01	1.044E+01	8.323E+02
17.29.40	9.117E+01	9.900E+00	7.452E+00		2.167E+01	1.056E+01	8.323E+02
17.29.50	9.005E+01	9.443E+00	8.238E+00		2.165E+01	1.056E+01	8.316E+02
17.30.00	9.042E+01	9.068E+00	9.522E+00		2.166E+01	1.056E+01	8.304E+02
17.30.10	9.098E+01	9.609E+00	8.404E+00		2.165E+01	1.064E+01	8.298E+02
17.30.20	9.114E+01	9.401E+00	7.162E+00		2.161E+01	1.068E+01	8.316E+02
17.30.30	9.302E+01	8.320E+00	7.617E+00		2.159E+01	1.076E+01	8.323E+02
17.30.40	9.368E+01	9.443E+00	7.534E+00		2.168E+01	1.056E+01	8.298E+02
17.30.50	9.137E+01	1.168E+01	7.286E+00		2.173E+01	1.032E+01	8.304E+02
17.31.00	9.114E+01	9.443E+00	8.445E+00		2.180E+01	9.280E+00	8.384E+02
17.31.10	9.170E+01	7.779E+00	8.487E+00		2.170E+01	1.048E+01	8.304E+02
17.31.20	9.170E+01	7.820E+00	8.445E+00		2.166E+01	1.032E+01	8.323E+02
17.31.30	9.325E+01	8.944E+00	9.149E+00		2.165E+01	1.044E+01	8.316E+02
17.31.40	9.055E+01	8.195E+00	8.776E+00		2.166E+01	1.056E+01	8.316E+02
17.31.50	9.150E+01	9.651E+00	9.770E+00		2.166E+01	1.056E+01	8.329E+02
17.32.00	9.282E+01	8.736E+00	8.073E+00		2.192E+01	1.024E+01	8.329E+02
17.32.10	9.688E+01	8.694E+00	6.706E+00		2.176E+01	1.036E+01	8.292E+02
17.32.20	9.141E+01	8.694E+00	8.197E+00		2.153E+01	1.084E+01	8.335E+02
17.32.30	9.477E+01	9.152E+00	7.410E+00		2.149E+01	1.100E+01	8.329E+02
17.32.40	9.636E+01	6.198E+00	6.292E+00		2.144E+01	1.112E+01	8.323E+02
17.32.50	9.441E+01	7.529E+00	6.831E+00		2.137E+01	1.124E+01	8.323E+02
17.33.00	9.807E+01	1.181E+01	7.162E+00		2.128E+01	1.132E+01	8.353E+02
17.33.10	9.959E+01	9.443E+00	5.961E+00		2.136E+01	1.120E+01	8.323E+02

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B4.- Continued

(d) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
17.33.20	9.596E+01	9.859E+00	5.175E+00		2.135E+01	1.092E+01	8.341E+02
17.33.30	9.566E+01	7.862E+00	4.305E+00		2.139E+01	1.084E+01	8.329E+02
17.33.40	9.385E+01	7.404E+00	6.292E+00		2.141E+01	1.092E+01	8.323E+02
17.33.50	9.381E+01	7.404E+00	6.417E+00		2.136E+01	1.092E+01	8.341E+02
17.34.00	9.652E+01	8.569E+00	5.961E+00		2.127E+01	1.116E+01	8.341E+02
17.34.10	9.774E+01	8.864E+00	6.003E+00		2.131E+01	1.096E+01	8.323E+02
17.34.20	9.675E+01	7.488E+00	6.831E+00		2.132E+01	1.104E+01	8.341E+02
17.34.30	9.652E+01	7.654E+00	6.085E+00		2.131E+01	1.104E+01	8.347E+02
17.34.40	9.553E+01	8.112E+00	7.576E+00		2.131E+01	1.112E+01	8.286E+02
17.34.50	9.477E+01	9.318E+00	8.238E+00		2.126E+01	1.128E+01	8.298E+02
17.35.00	1.002E+02	6.531E+00	7.410E+00		2.129E+01	1.120E+01	8.304E+02
17.35.10	9.685E+01	9.651E+00	7.659E+00		2.122E+01	1.108E+01	8.347E+02
17.35.20	9.857E+01	6.448E+00	7.741E+00		2.119E+01	1.120E+01	8.347E+02
17.35.30	9.702E+01	8.320E+00	9.439E+00		2.113E+01	1.136E+01	8.353E+02
17.35.40	9.629E+01	9.318E+00	9.273E+00		2.114E+01	1.136E+01	8.335E+02
17.35.50	9.322E+01	8.819E+00	7.327E+00		2.114E+01	1.140E+01	8.335E+02
17.36.00	9.487E+01	8.985E+00	7.162E+00		2.097E+01	1.172E+01	8.353E+02
17.36.10	1.018E+02	8.403E+00	7.700E+00		2.093E+01	1.180E+01	8.359E+02
17.36.20	1.023E+02	9.609E+00	7.369E+00		2.113E+01	1.132E+01	8.347E+02
17.36.30	9.791E+01	6.323E+00	7.203E+00		2.113E+01	1.136E+01	8.341E+02
17.36.40	9.477E+01	4.576E+00	7.741E+00		2.107E+01	1.160E+01	8.335E+02
17.36.50	9.678E+01	7.571E+00	8.487E+00		2.110E+01	1.152E+01	8.335E+02
17.37.00	9.830E+01	9.443E+00	7.617E+00		2.106E+01	1.168E+01	8.341E+02
17.37.10	9.718E+01	8.819E+00	6.499E+00		2.099E+01	1.188E+01	8.335E+02
17.37.20	9.870E+01	9.027E+00	7.659E+00		2.082E+01	1.216E+01	8.341E+02
17.37.30	1.062E+02	8.611E+00	4.595E+00		2.076E+01	1.232E+01	8.341E+02
17.37.40	1.100E+02	8.403E+00	4.015E+00		2.087E+01	1.216E+01	8.365E+02
17.37.50	9.946E+01	7.945E+00	6.251E+00		2.100E+01	1.188E+01	8.323E+02
17.38.00	9.774E+01	7.571E+00	6.541E+00		2.085E+01	1.240E+01	8.341E+02
17.38.10	1.053E+02	8.195E+00	7.824E+00		2.074E+01	1.236E+01	8.323E+02
17.38.20	1.066E+02	6.656E+00	7.038E+00		2.079E+01	1.248E+01	8.316E+02
17.38.30	1.031E+02	7.904E+00	7.948E+00		2.080E+01	1.244E+01	8.335E+02
17.38.40	1.015E+02	8.736E+00	8.528E+00		2.094E+01	1.184E+01	8.341E+02
17.38.50	9.504E+01	1.035E+01	7.741E+00		2.096E+01	1.176E+01	8.353E+02
17.39.00	9.801E+01	9.235E+00	8.611E+00		2.098E+01	1.208E+01	8.310E+02
17.39.10	9.929E+01	7.987E+00	7.741E+00		2.108E+01	1.112E+01	8.316E+02
17.39.20	9.309E+01	6.739E+00	8.859E+00		2.114E+01	1.092E+01	8.323E+02
17.39.30	8.837E+01	8.112E+00	9.811E+00		2.115E+01	1.104E+01	8.329E+02
17.39.40	8.989E+01	7.696E+00	9.522E+00		2.118E+01	1.020E+01	8.323E+02
17.39.50	8.867E+01	7.862E+00	9.687E+00		2.104E+01	1.044E+01	8.365E+02
17.40.00	8.847E+01	8.944E+00	8.818E+00		2.086E+01	1.096E+01	8.359E+02
17.40.10	9.187E+01	8.569E+00	9.232E+00		2.089E+01	1.040E+01	8.365E+02
17.40.20	8.886E+01	6.864E+00	9.273E+00		2.091E+01	9.840E+00	8.365E+02
17.40.30	8.741E+01	8.278E+00	9.232E+00		2.089E+01	9.960E+00	8.384E+02

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B4.- Continued

(e) Leg C → A

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
17.42.40	8.626E+01	6.531E+00	9.439E+00		2.230E+01	1.564E+01	5.457E+02
17.42.50	8.471E+01	7.196E+00	9.190E+00		2.251E+01	1.572E+01	5.316E+02
17.43.00	8.273E+01	9.942E+00	8.031E+00		2.245E+01	1.564E+01	5.377E+02
17.43.10	8.632E+01	9.276E+00	7.824E+00		2.241E+01	1.568E+01	5.371E+02
17.43.20	8.481E+01	9.152E+00	7.410E+00		2.240E+01	1.564E+01	5.365E+02
17.43.30	8.451E+01	9.152E+00	7.493E+00		2.233E+01	1.556E+01	5.377E+02
17.43.40	8.652E+01	1.177E+01	6.582E+00		2.223E+01	1.568E+01	5.402E+02
17.43.50	8.490E+01	1.064E+01	6.624E+00		2.216E+01	1.572E+01	5.420E+02
17.44.00	8.510E+01	1.019E+01	7.286E+00		2.217E+01	1.576E+01	5.444E+02
17.44.10	8.735E+01	1.148E+01	6.831E+00		2.227E+01	1.580E+01	5.402E+02
17.44.20	8.504E+01	1.064E+01	5.299E+00		2.232E+01	1.576E+01	5.395E+02
17.44.30	8.646E+01	8.902E+00	6.541E+00		2.233E+01	1.576E+01	5.408E+02
17.44.40	8.553E+01	7.945E+00	5.961E+00		2.235E+01	1.580E+01	5.414E+02
17.44.50	8.655E+01	4.950E+00	3.477E+00		2.238E+01	1.580E+01	5.414E+02
17.45.00	8.768E+01	7.612E+00	1.117E+00		2.244E+01	1.572E+01	5.395E+02
17.45.10	8.741E+01	5.491E+00	3.767E+00		2.244E+01	1.576E+01	5.395E+02
17.45.20	8.543E+01	8.403E+00	5.506E+00		2.245E+01	1.584E+01	5.395E+02
17.45.30	8.606E+01	7.238E+00	6.168E+00		2.248E+01	1.592E+01	5.383E+02
17.45.40	8.613E+01	6.156E+00	7.659E+00		2.245E+01	1.588E+01	5.383E+02
17.45.50	8.550E+01	5.865E+00	6.334E+00		2.248E+01	1.556E+01	5.389E+02
17.46.00	8.698E+01	8.944E+00	3.933E+00		2.253E+01	1.540E+01	5.377E+02
17.46.10	8.622E+01	8.320E+00	6.003E+00		2.259E+01	1.516E+01	5.383E+02
17.46.20	8.936E+01	9.360E+00	6.210E+00		2.267E+01	1.480E+01	5.389E+02
17.46.30	8.781E+01	9.152E+00	5.713E+00		2.271E+01	1.452E+01	5.389E+02
17.46.40	9.203E+01	1.044E+01	5.133E+00		2.266E+01	1.484E+01	5.389E+02
17.46.50	9.144E+01	9.692E+00	4.802E+00		2.263E+01	1.488E+01	5.389E+02
17.47.00	9.035E+01	6.947E+00	4.761E+00		2.261E+01	1.500E+01	5.389E+02
17.47.10	8.929E+01	1.010E+01	4.719E+00		2.268E+01	1.432E+01	5.389E+02
17.47.20	8.883E+01	7.904E+00	5.630E+00		2.281E+01	1.448E+01	5.365E+02
17.47.30	9.028E+01	9.068E+00	5.837E+00		2.287E+01	1.404E+01	5.365E+02
17.47.40	9.434E+01	8.777E+00	5.382E+00		2.293E+01	1.376E+01	5.359E+02
17.47.50	9.566E+01	8.361E+00	7.079E+00		2.300E+01	1.340E+01	5.359E+02
17.48.00	9.695E+01	9.068E+00	6.624E+00		2.304E+01	1.324E+01	5.371E+02
17.48.10	9.956E+01	1.164E+01	6.085E+00		2.307E+01	1.348E+01	5.359E+02
17.48.20	9.906E+01	7.737E+00	5.092E+00		2.305E+01	1.324E+01	5.383E+02
17.48.30	9.933E+01	9.027E+00	4.843E+00		2.304E+01	1.328E+01	5.365E+02
17.48.40	9.645E+01	7.987E+00	6.499E+00		2.299E+01	1.316E+01	5.377E+02
17.48.50	9.883E+01	8.985E+00	6.748E+00		2.301E+01	1.296E+01	5.371E+02
17.49.00	9.942E+01	7.113E+00	6.831E+00		2.295E+01	1.348E+01	5.365E+02
17.49.10	9.807E+01	6.656E+00	5.630E+00		2.301E+01	1.304E+01	5.377E+02
17.49.20	9.929E+01	4.784E+00	6.996E+00		2.307E+01	1.308E+01	5.377E+02
17.49.30	9.870E+01	5.824E+00	9.149E+00		2.310E+01	1.304E+01	5.377E+02
17.49.40	9.830E+01	7.737E+00	6.582E+00		2.311E+01	1.296E+01	5.371E+02
17.49.50	9.860E+01	9.318E+00	7.534E+00		2.308E+01	1.260E+01	5.383E+02
17.50.00	1.000E+02	9.193E+00	7.410E+00		2.295E+01	1.348E+01	5.377E+02
17.50.10	9.883E+01	6.988E+00	7.783E+00		2.299E+01	1.328E+01	5.383E+02
17.50.20	9.642E+01	8.902E+00	7.741E+00		2.305E+01	1.340E+01	5.389E+02
17.50.30	9.428E+01	7.779E+00	8.776E+00		2.288E+01	1.448E+01	5.420E+02
17.50.40	9.230E+01	7.030E+00	7.162E+00		2.292E+01	1.424E+01	5.389E+02
17.50.50	9.243E+01	8.112E+00	8.528E+00		2.260E+01	1.672E+01	5.402E+02

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B4.- Continued

(e) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
17.51.00	8.358E+01	7.196E+00	7.286E+00		2.227E+01	1.984E+01	5.420E+02
17.51.10	7.405E+01	7.654E+00	6.913E+00		2.236E+01	1.888E+01	5.340E+02
17.51.20	7.784E+01	7.113E+00	6.624E+00		2.230E+01	1.896E+01	5.426E+02
17.51.30	7.956E+01	8.236E+00	6.044E+00		2.248E+01	1.804E+01	5.365E+02
17.51.40	8.038E+01	1.052E+01	5.382E+00		2.272E+01	1.640E+01	5.389E+02
17.51.50	8.995E+01	9.110E+00	6.251E+00		2.280E+01	1.628E+01	5.408E+02
17.52.00	8.877E+01	7.945E+00	7.659E+00		2.273E+01	1.728E+01	5.383E+02
17.52.10	8.510E+01	7.987E+00	8.652E+00		2.272E+01	1.732E+01	5.377E+02
17.52.20	8.698E+01	8.112E+00	6.624E+00		2.296E+01	1.648E+01	5.383E+02
17.52.30	8.824E+01	9.526E+00	5.589E+00		2.295E+01	1.764E+01	5.377E+02
17.52.40	7.969E+01	9.817E+00	5.092E+00		2.287E+01	1.732E+01	5.402E+02
17.52.50	8.619E+01	1.040E+01	4.843E+00		2.299E+01	1.748E+01	5.426E+02
17.53.00	8.184E+01	9.900E+00	6.541E+00		2.318E+01	1.752E+01	5.365E+02
17.53.10	8.243E+01	1.010E+01	5.961E+00		2.329E+01	1.596E+01	5.395E+02
17.53.20	8.685E+01	7.654E+00	4.140E+00		2.307E+01	1.780E+01	5.402E+02
17.53.30	8.329E+01	7.737E+00	5.961E+00		2.316E+01	1.732E+01	5.408E+02
17.53.40	8.276E+01	8.860E+00	6.541E+00		2.317E+01	1.764E+01	5.395E+02
17.53.50	8.256E+01	8.403E+00	6.582E+00		2.334E+01	1.700E+01	5.371E+02
17.54.00	8.523E+01	9.318E+00	9.397E+00		2.335E+01	1.708E+01	5.414E+02
17.54.10	8.365E+01	9.984E+00	1.018E+01		2.330E+01	1.492E+01	5.457E+02
17.54.20	8.461E+01	9.942E+00	9.687E+00		2.334E+01	1.596E+01	5.481E+02
17.54.30	8.646E+01	9.068E+00	1.010E+01		2.337E+01	1.372E+01	5.573E+02
17.54.40	8.269E+01	9.942E+00	9.853E+00		2.334E+01	1.680E+01	5.469E+02
17.54.50	8.197E+01	8.819E+00	9.687E+00		2.351E+01	1.352E+01	5.518E+02
17.55.00	8.695E+01	7.987E+00	8.983E+00		2.362E+01	1.396E+01	5.518E+02
17.55.10	8.992E+01	6.947E+00	9.025E+00		2.358E+01	1.644E+01	5.426E+02
17.55.20	8.685E+01	6.531E+00	6.417E+00		2.361E+01	1.780E+01	5.432E+02
17.55.30	8.398E+01	7.404E+00	5.671E+00		2.390E+01	1.796E+01	5.408E+02
17.55.40	8.609E+01	6.780E+00	7.162E+00		2.425E+01	1.620E+01	5.292E+02
17.55.50	9.276E+01	5.408E+00	7.824E+00		2.397E+01	1.700E+01	5.389E+02
17.56.00	8.966E+01	5.948E+00	7.038E+00		2.404E+01	1.696E+01	5.371E+02
17.56.10	8.995E+01	8.569E+00	6.665E+00		2.400E+01	1.740E+01	5.402E+02
17.56.20	8.992E+01	1.015E+01	7.534E+00		2.402E+01	1.728E+01	5.402E+02
17.56.30	9.061E+01	8.860E+00	6.003E+00		2.410E+01	1.752E+01	5.383E+02
17.56.40	8.725E+01	7.945E+00	7.245E+00		2.410E+01	1.712E+01	5.322E+02
17.56.50	9.183E+01	9.776E+00	7.162E+00		2.406E+01	1.740E+01	5.188E+02
17.57.00	8.867E+01	9.984E+00	6.168E+00		2.464E+01	1.704E+01	4.815E+02
17.57.10	9.210E+01	7.404E+00	4.636E+00		2.510E+01	1.664E+01	4.430E+02

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B4.- Continued

(f) Leg A → C

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
17.59.00	9.160E+01	1.193E+01	5.506E+00		2.708E+01	1.832E+01	2.322E+02
17.59.10	9.028E+01	1.064E+01	7.741E+00		2.708E+01	1.780E+01	2.328E+02
17.59.20	9.098E+01	1.098E+01	6.789E+00		2.688E+01	1.824E+01	2.364E+02
17.59.30	9.312E+01	9.609E+00	7.203E+00		2.686E+01	1.576E+01	2.444E+02
17.59.40	9.398E+01	6.614E+00	7.824E+00		2.684E+01	1.684E+01	2.407E+02
17.59.50	9.395E+01	7.696E+00	6.955E+00		2.679E+01	1.788E+01	2.377E+02
18.00.00	9.325E+01	8.860E+00	7.493E+00		2.689E+01	1.756E+01	2.358E+02
18.00.10	9.147E+01	9.900E+00	8.735E+00		2.681E+01	1.776E+01	2.352E+02
18.00.20	9.302E+01	8.361E+00	7.410E+00		2.677E+01	1.812E+01	2.432E+02
18.00.30	9.174E+01	9.443E+00	8.487E+00		2.688E+01	1.740E+01	2.346E+02
18.00.40	9.408E+01	9.568E+00	8.487E+00		2.683E+01	1.824E+01	2.419E+02
18.00.50	9.078E+01	1.160E+01	6.831E+00		2.683E+01	1.864E+01	2.340E+02
18.01.00	9.302E+01	1.006E+01	6.706E+00		2.668E+01	1.852E+01	2.334E+02
18.01.10	9.154E+01	9.526E+00	8.611E+00		2.668E+01	1.748E+01	2.352E+02
18.01.20	9.289E+01	7.113E+00	8.569E+00		2.651E+01	1.856E+01	2.371E+02
18.01.30	8.768E+01	7.987E+00	9.439E+00		2.654E+01	1.864E+01	2.389E+02
18.01.40	9.061E+01	7.072E+00	8.114E+00		2.655E+01	1.840E+01	2.316E+02
18.01.50	8.923E+01	8.361E+00	6.831E+00		2.653E+01	1.828E+01	2.322E+02
18.02.00	8.893E+01	1.044E+01	6.706E+00		2.652E+01	1.808E+01	2.303E+02
18.02.10	8.926E+01	1.139E+01	5.216E+00		2.639E+01	1.848E+01	2.426E+02
18.02.20	8.906E+01	8.944E+00	4.512E+00		2.648E+01	1.808E+01	2.328E+02
18.02.30	8.936E+01	8.985E+00	5.382E+00		2.653E+01	1.824E+01	2.377E+02
18.02.40	8.933E+01	8.528E+00	6.044E+00		2.666E+01	1.840E+01	2.322E+02
18.02.50	8.903E+01	8.902E+00	6.913E+00		2.653E+01	1.808E+01	2.279E+02
18.03.00	8.807E+01	9.276E+00	7.493E+00		2.637E+01	1.792E+01	2.352E+02
18.03.10	8.817E+01	7.529E+00	7.493E+00		2.634E+01	1.816E+01	2.334E+02
18.03.20	8.556E+01	7.196E+00	6.913E+00		2.628E+01	1.820E+01	2.328E+02
18.03.30	8.923E+01	1.031E+01	7.576E+00		2.614E+01	1.816E+01	2.377E+02
18.03.40	8.913E+01	1.006E+01	6.789E+00		2.616E+01	1.804E+01	2.309E+02
18.03.50	8.728E+01	8.444E+00	7.617E+00		2.600E+01	1.788E+01	2.377E+02
18.04.00	9.164E+01	9.401E+00	9.439E+00		2.595E+01	1.732E+01	2.432E+02
18.04.10	8.801E+01	9.068E+00	7.576E+00		2.586E+01	1.760E+01	2.413E+02
18.04.20	8.863E+01	6.572E+00	5.050E+00		2.598E+01	1.796E+01	2.291E+02
18.04.30	9.098E+01	7.030E+00	6.251E+00		2.583E+01	1.756E+01	2.364E+02
18.04.40	9.042E+01	9.110E+00	8.776E+00		2.550E+01	1.788E+01	2.407E+02
18.04.50	8.362E+01	9.484E+00	9.770E+00		2.541E+01	1.844E+01	2.419E+02
18.05.00	8.345E+01	7.904E+00	8.735E+00		2.538E+01	1.888E+01	2.407E+02
18.05.10	8.283E+01	9.276E+00	7.534E+00		2.528E+01	1.960E+01	2.432E+02
18.05.20	8.147E+01	8.652E+00	5.175E+00		2.538E+01	1.860E+01	2.407E+02
18.05.30	8.378E+01	9.568E+00	6.210E+00		2.560E+01	1.840E+01	2.328E+02
18.05.40	9.038E+01	8.236E+00	6.417E+00		2.534E+01	1.864E+01	2.383E+02
18.05.50	8.408E+01	7.238E+00	6.168E+00		2.523E+01	1.900E+01	2.328E+02
18.06.00	8.913E+01	9.360E+00	8.942E+00		2.535E+01	1.740E+01	2.352E+02
18.06.10	9.180E+01	9.027E+00	9.687E+00		2.517E+01	1.848E+01	2.334E+02
18.06.20	8.916E+01	8.736E+00	8.321E+00		2.486E+01	2.028E+01	2.383E+02
18.06.30	8.543E+01	1.106E+01	8.569E+00		2.486E+01	1.976E+01	2.328E+02
18.06.40	8.421E+01	1.081E+01	9.604E+00		2.477E+01	1.860E+01	2.383E+02
18.06.50	8.474E+01	1.040E+01	8.942E+00		2.463E+01	1.932E+01	2.371E+02
18.07.00	8.151E+01	9.068E+00	6.706E+00		2.456E+01	1.952E+01	2.352E+02
18.07.10	7.873E+01	8.777E+00	7.203E+00		2.440E+01	1.980E+01	2.395E+02

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B4.- Continued

(f) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.07.20	8.160E+01	9.068E+00	7.700E+00		2.440E+01	1.960E+01	2.371E+02
18.07.30	8.048E+01	8.320E+00	8.404E+00		2.427E+01	2.032E+01	2.352E+02
18.07.40	8.329E+01	8.777E+00	8.321E+00		2.423E+01	2.008E+01	2.352E+02
18.07.50	7.956E+01	1.119E+01	1.010E+01		2.429E+01	1.940E+01	2.377E+02
18.08.00	7.715E+01	1.023E+01	1.043E+01		2.420E+01	1.972E+01	2.371E+02
18.08.10	7.821E+01	1.081E+01	8.155E+00		2.436E+01	1.892E+01	2.358E+02
18.08.20	7.108E+01	9.235E+00	6.582E+00		2.441E+01	1.892E+01	2.352E+02
18.08.30	7.332E+01	9.484E+00	6.251E+00		2.420E+01	1.988E+01	2.358E+02
18.08.40	7.566E+01	9.984E+00	6.334E+00		2.423E+01	1.928E+01	2.352E+02
18.08.50	7.144E+01	1.044E+01	4.761E+00		2.413E+01	1.940E+01	2.358E+02
18.09.00	7.395E+01	1.027E+01	4.885E+00		2.423E+01	1.912E+01	2.346E+02
18.09.10	7.025E+01	9.360E+00	4.181E+00		2.422E+01	1.912E+01	2.352E+02
18.09.20	6.953E+01	7.820E+00	4.968E+00		2.420E+01	1.920E+01	2.358E+02
18.09.30	6.989E+01	9.609E+00	4.636E+00		2.423E+01	1.912E+01	2.352E+02
18.09.40	7.444E+01	1.139E+01	3.891E+00		2.418E+01	1.916E+01	2.371E+02
18.09.50	7.573E+01	1.044E+01	4.264E+00		2.415E+01	1.920E+01	2.371E+02
18.10.00	7.566E+01	8.528E+00	6.499E+00		2.417E+01	1.920E+01	2.352E+02
18.10.10	7.329E+01	1.073E+01	6.292E+00		2.415E+01	1.920E+01	2.364E+02
18.10.20	7.322E+01	9.484E+00	5.423E+00		2.415E+01	1.924E+01	2.352E+02
18.10.30	7.263E+01	1.094E+01	3.767E+00		2.415E+01	1.920E+01	2.358E+02
18.10.40	7.514E+01	1.114E+01	4.347E+00		2.416E+01	1.920E+01	2.352E+02
18.10.50	7.184E+01	8.403E+00	6.955E+00		2.415E+01	1.924E+01	2.364E+02
18.11.00	7.144E+01	7.737E+00	7.079E+00		2.415E+01	1.924E+01	2.352E+02
18.11.10	7.098E+01	8.236E+00	6.706E+00		2.420E+01	1.924E+01	2.352E+02
18.11.20	6.969E+01	8.569E+00	6.913E+00		2.423E+01	1.920E+01	2.358E+02
18.11.30	6.616E+01	9.900E+00	6.996E+00		2.430E+01	1.912E+01	2.358E+02
18.11.40	6.091E+01	7.404E+00	7.576E+00		2.437E+01	1.900E+01	2.352E+02
18.11.50	6.184E+01	6.115E+00	6.499E+00		2.431E+01	1.912E+01	2.358E+02
18.12.00	6.072E+01	9.401E+00	6.085E+00		2.426E+01	1.920E+01	2.358E+02
18.12.10	6.375E+01	1.048E+01	6.292E+00		2.427E+01	1.920E+01	2.352E+02
18.12.20	6.583E+01	8.819E+00	4.802E+00		2.428E+01	1.924E+01	2.352E+02
18.12.30	6.286E+01	7.987E+00	4.512E+00		2.432E+01	1.904E+01	2.352E+02
18.12.40	6.124E+01	9.401E+00	4.222E+00		2.436E+01	1.892E+01	2.358E+02
18.12.50	6.369E+01	8.611E+00	5.092E+00		2.435E+01	1.896E+01	2.358E+02
18.13.00	6.332E+01	8.028E+00	3.808E+00		2.433E+01	1.908E+01	2.346E+02
18.13.10	6.484E+01	9.609E+00	3.933E+00		2.437E+01	1.884E+01	2.346E+02
18.13.20	6.362E+01	8.944E+00	4.429E+00		2.440E+01	1.896E+01	2.346E+02
18.13.30	6.431E+01	8.320E+00	6.251E+00		2.440E+01	1.900E+01	2.352E+02
18.13.40	6.293E+01	8.070E+00	7.700E+00		2.447E+01	1.888E+01	2.340E+02
18.13.50	6.141E+01	7.779E+00	7.038E+00		2.447E+01	1.892E+01	2.346E+02
18.14.00	6.527E+01	7.737E+00	6.872E+00		2.448E+01	1.908E+01	2.297E+02

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B4.- Continued

(g) Spiral at B

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{ap} , °C	h, m
18.22.10	7.999E+01	4.284E+00	4.719E+00		2.688E+01	2.032E+01	7.822E+01
18.22.20	8.094E+01	5.907E+00	3.850E+00		2.688E+01	1.984E+01	8.860E+01
18.22.30	8.497E+01	4.950E+00	9.936E-01		2.640E+01	1.908E+01	1.289E+02
18.22.40	8.675E+01	4.035E+00	7.866E-01		2.597E+01	1.944E+01	1.613E+02
18.22.50	8.441E+01	5.075E+00	2.070E-01		2.565E+01	1.928E+01	1.912E+02
18.23.00	8.761E+01	3.993E+00	2.235E+00		2.552E+01	1.900E+01	2.151E+02
18.23.10	8.662E+01	1.955E+00	2.028E+00		2.553E+01	1.824E+01	2.364E+02
18.23.20	8.794E+01	5.033E+00	3.312E+00		2.539E+01	1.792E+01	2.597E+02
18.23.30	8.893E+01	5.491E+00	4.802E+00		2.516E+01	1.788E+01	2.945E+02
18.23.40	8.758E+01	4.617E+00	6.789E+00		2.471E+01	1.776E+01	3.299E+02
18.23.50	8.583E+01	2.579E+00	6.003E+00		2.446E+01	1.816E+01	3.538E+02
18.24.00	8.662E+01	4.534E+00	5.589E+00		2.413E+01	1.856E+01	3.843E+02
18.24.10	8.246E+01	4.825E+00	5.506E+00		2.365E+01	1.812E+01	4.253E+02
18.24.20	8.398E+01	7.737E+00	4.347E+00		2.334E+01	1.748E+01	4.534E+02
18.24.30	8.629E+01	8.028E+00	1.945E+00		2.305E+01	1.752E+01	4.809E+02
18.24.40	8.246E+01	6.115E+00	1.945E+00		2.269E+01	1.760E+01	5.145E+02
18.24.50	8.045E+01	4.867E+00	1.076E+00		2.233E+01	1.776E+01	5.475E+02
18.25.00	8.025E+01	5.990E+00	2.732E+00		2.196E+01	1.812E+01	5.799E+02
18.25.10	7.662E+01	2.496E+00	2.318E+00		2.188E+01	1.648E+01	6.074E+02
18.25.20	9.055E+01	2.828E+00	1.945E+00		2.194E+01	1.436E+01	6.337E+02
18.25.30	9.985E+01	3.244E+00	1.159E+00		2.141E+01	1.640E+01	6.630E+02
18.25.40	8.702E+01	3.993E+00	8.694E-01		2.149E+01	1.420E+01	6.880E+02
18.25.50	1.030E+02	5.116E+00	2.898E+00		2.114E+01	1.472E+01	7.137E+02
18.26.00	9.117E+01	5.824E+00	4.305E+00		2.052E+01	1.904E+01	7.467E+02
18.26.10	7.992E+01	3.993E+00	2.898E+00		2.086E+01	1.304E+01	7.760E+02
18.26.20	1.056E+02	4.867E+00	4.222E+00		2.096E+01	1.192E+01	8.096E+02
18.26.30	1.021E+02	4.825E+00	5.257E+00		2.090E+01	1.148E+01	8.402E+02
18.26.40	9.685E+01	3.910E+00	5.299E+00		2.082E+01	1.064E+01	8.671E+02
18.26.50	9.164E+01	2.662E+00	3.560E+00		2.078E+01	9.800E+00	8.946E+02
18.27.00	8.728E+01	2.038E+00	2.856E+00		2.075E+01	9.920E+00	9.245E+02
18.27.10	9.266E+01	2.246E+00	4.057E+00		2.063E+01	9.960E+00	9.526E+02
18.27.20	9.058E+01	3.286E+00	3.229E+00		2.045E+01	9.920E+00	9.771E+02
18.27.30	8.688E+01	7.488E-01	2.856E+00		2.034E+01	9.920E+00	9.960E+02
18.27.40	8.358E+01	3.993E+00	1.407E+00		2.025E+01	9.840E+00	1.017E+03
18.27.50	8.012E+01	4.118E+00	1.200E+00		2.011E+01	9.800E+00	1.039E+03
18.28.00	8.220E+01	2.121E+00	1.697E+00		1.989E+01	9.640E+00	1.064E+03
18.28.10	8.233E+01	2.704E+00	3.933E+00		1.973E+01	9.360E+00	1.090E+03
18.28.20	8.289E+01	5.408E+00	4.264E+00		1.947E+01	9.400E+00	1.117E+03
18.28.30	8.193E+01	2.787E+00	5.754E+00		1.933E+01	8.920E+00	1.142E+03
18.28.40	7.613E+01	1.955E+00	5.796E+00		1.914E+01	8.840E+00	1.167E+03
18.28.50	7.669E+01	3.161E+00	4.843E+00		1.894E+01	9.480E+00	1.192E+03
18.29.00	7.946E+01	3.702E+00	2.359E+00		1.873E+01	9.080E+00	1.216E+03
18.29.10	7.979E+01	4.659E+00	1.656E+00		1.850E+01	9.720E+00	1.244E+03
18.29.20	7.708E+01	4.409E+00	8.280E-01		1.824E+01	9.720E+00	1.269E+03
18.29.30	8.151E+01	1.830E+00	1.904E+00		1.799E+01	9.800E+00	1.294E+03
18.29.40	7.817E+01	3.619E+00	5.796E-01		1.770E+01	9.880E+00	1.321E+03
18.29.50	7.613E+01	3.702E+00	4.968E-01		1.742E+01	1.000E+01	1.347E+03
18.30.00	7.797E+01	4.867E+00	1.324E+00		1.709E+01	9.920E+00	1.376E+03
18.30.10	7.755E+01	3.827E+00	2.235E+00		1.676E+01	9.880E+00	1.406E+03
18.30.20	7.599E+01	4.243E+00	1.366E+00		1.644E+01	9.920E+00	1.436E+03

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B4.- Concluded

(g) Concluded

zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.30.30	7.444E+01	3.660E+00	1.987E+00		1.610E+01	9.960E+00	1.467E+03
18.30.40	7.698E+01	4.784E+00	1.863E+00		1.571E+01	9.880E+00	1.502E+03
18.30.50	7.738E+01	3.203E+00	1.945E+00		1.534E+01	9.920E+00	1.536E+03
18.31.00	7.586E+01	5.200E+00	1.449E+00		1.493E+01	9.960E+00	1.574E+03
18.31.10	7.659E+01	4.368E+00	3.105E+00		1.459E+01	1.000E+01	1.609E+03
18.31.20	7.540E+01	3.868E+00	3.891E+00		1.445E+01	1.016E+01	1.637E+03
18.31.30	7.012E+01	3.910E+00	3.684E+00		1.440E+01	9.520E+00	1.665E+03
18.31.40	6.626E+01	3.702E+00	4.015E+00		1.442E+01	8.720E+00	1.693E+03
18.31.50	6.748E+01	3.744E+00	2.525E+00		1.423E+01	9.240E+00	1.723E+03
18.32.00	6.976E+01	5.241E+00	1.863E+00		1.402E+01	9.240E+00	1.750E+03
18.32.10	6.926E+01	1.123E+00	5.796E-01		1.394E+01	9.280E+00	1.777E+03
18.32.20	6.758E+01	8.736E-01	3.726E-01		1.384E+01	8.680E+00	1.808E+03
18.32.30	6.903E+01	2.288E+00	1.366E+00		1.376E+01	8.000E+00	1.840E+03
18.32.40	6.979E+01	2.454E+00	1.738E+00		1.472E+01	3.440E+00	1.874E+03
18.32.50	6.342E+01	3.993E+00	3.187E+00		1.512E+01	1.080E+00	1.907E+03
18.33.00	6.207E+01	1.248E+00	2.939E+00		1.528E+01	1.160E+00	1.937E+03
18.33.10	5.798E+01	8.320E-01	5.796E-01		1.565E+01	5.920E+00	1.962E+03
18.33.20	5.524E+01	3.036E+00	5.796E-01		1.550E+01	6.200E+00	1.989E+03
18.33.30	5.811E+01	2.620E+00	2.401E+00		1.547E+01	6.840E+00	2.011E+03
18.33.40	5.629E+01	2.537E+00	1.490E+00		1.551E+01	9.240E+00	2.037E+03
18.33.50	5.619E+01	2.579E+00	4.140E-02		1.548E+01	1.232E+01	2.066E+03
18.34.00	5.699E+01	1.913E+00	4.140E-02		1.529E+01	1.428E+01	2.096E+03
18.34.10	5.907E+01	1.206E+00	1.366E+00		1.513E+01	1.556E+01	2.131E+03
18.34.20	5.798E+01	2.246E+00	1.407E+00		1.515E+01	1.644E+01	2.168E+03
18.34.30	6.497E+01	3.952E+00	8.280E-01		1.524E+01	1.704E+01	2.204E+03
18.34.40	6.319E+01	4.368E+00	2.070E+00		1.523E+01	1.744E+01	2.240E+03
18.34.50	6.118E+01	4.368E+00	2.732E+00		1.520E+01	1.780E+01	2.278E+03
18.35.00	6.240E+01	5.616E+00	1.242E+00		1.493E+01	1.708E+01	2.314E+03
18.35.10	5.115E+01	4.576E+00	4.554E-01		1.470E+01	1.600E+01	2.343E+03
18.35.20	5.019E+01	5.491E+00	9.936E-01		1.458E+01	1.552E+01	2.364E+03
18.35.30	4.857E+01	4.492E+00	2.359E+00		1.447E+01	1.568E+01	2.386E+03
18.35.40	4.870E+01	3.286E+00	2.691E+00		1.426E+01	1.568E+01	2.413E+03
18.35.50	4.620E+01	4.451E+00	2.152E+00		1.400E+01	1.576E+01	2.441E+03
18.36.00	4.798E+01	3.078E+00	1.573E+00		1.375E+01	1.592E+01	2.471E+03
18.36.10	4.613E+01	1.705E+00	4.140E-02		1.346E+01	1.604E+01	2.503E+03
18.36.20	4.521E+01	3.369E+00	6.624E-01		1.318E+01	1.608E+01	2.534E+03
18.36.30	4.672E+01	3.494E+00	2.070E-01		1.292E+01	1.608E+01	2.561E+03
18.36.40	4.530E+01	4.368E+00	2.608E+00		1.266E+01	1.596E+01	2.590E+03
18.36.50	4.702E+01	2.080E+00	3.808E+00		1.238E+01	1.588E+01	2.619E+03
18.37.00	4.534E+01	1.622E+00	2.732E+00		1.213E+01	1.604E+01	2.649E+03
18.37.10	4.392E+01	3.577E+00	2.856E+00		1.188E+01	1.624E+01	2.676E+03
18.37.20	4.455E+01	6.531E+00	4.222E+00		1.164E+01	1.644E+01	2.703E+03
18.37.30	4.507E+01	4.659E+00	3.063E+00		1.145E+01	1.680E+01	2.728E+03
18.37.40	4.224E+01	2.953E+00	2.898E+00		1.129E+01	1.740E+01	2.751E+03
18.37.50	4.478E+01	2.288E+00	9.522E-01		1.124E+01	1.804E+01	2.771E+03
18.38.00	4.606E+01	3.244E+00	5.796E-01		1.113E+01	1.844E+01	2.792E+03
18.38.10	4.643E+01	3.328E+00	3.726E-01		1.103E+01	1.872E+01	2.815E+03
18.38.20	4.600E+01	1.664E+00	1.945E+00		1.109E+01	1.892E+01	2.839E+03
18.38.30	4.831E+01	1.248E+00	1.200E+00		1.116E+01	1.912E+01	2.862E+03
18.38.40	4.907E+01	1.747E+00	3.312E-01		1.102E+01	1.920E+01	2.887E+03
18.38.50	4.903E+01	1.664E+00	2.484E-01		1.087E+01	1.932E+01	2.912E+03
18.39.00	4.794E+01	2.537E+00	4.968E-01		1.086E+01	1.944E+01	2.936E+03
18.39.10	5.068E+01	4.576E-01	8.694E-01		1.130E+01	1.956E+01	2.961E+03
18.39.20	5.128E+01	2.204E+00	1.159E+00		1.170E+01	1.964E+01	2.964E+03
18.39.30	5.441E+01	4.368E+00	1.449E+00		1.142E+01	1.968E+01	2.941E+03

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B5.- AIRCRAFT DATA FOR REMOTE SENSOR CALIBRATION

EXPERIMENT ON JULY 20, 1978

(a) Leg A → C

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{ap} , °C	h, m
15.58.40	5.484E+01	6.198E+00	3.477E+00		2.525E+01	1.900E+01	2.254E+02
15.58.50	5.322E+01	6.572E+00	4.678E+00		2.537E+01	1.904E+01	2.242E+02
15.59.00	5.322E+01	6.406E+00	5.340E+00		2.547E+01	1.916E+01	2.206E+02
15.59.10	5.544E+01	6.198E+00	5.340E+00		2.528E+01	1.900E+01	2.157E+02
15.59.20	5.501E+01	7.280E+00	5.340E+00		2.509E+01	1.732E+01	2.309E+02
15.59.30	5.563E+01	7.196E+00	4.015E+00		2.504E+01	1.892E+01	2.193E+02
15.59.40	5.491E+01	7.238E+00	3.353E+00		2.496E+01	1.912E+01	2.193E+02
15.59.50	5.514E+01	7.571E+00	3.933E+00		2.485E+01	1.928E+01	2.218E+02
16.00.00	5.471E+01	6.780E+00	4.015E+00		2.472E+01	1.916E+01	2.248E+02
16.00.10	5.643E+01	7.238E+00	4.181E+00		2.480E+01	1.944E+01	2.261E+02
16.00.20	5.718E+01	8.361E+00	3.146E+00		2.481E+01	1.936E+01	2.199E+02
16.00.30	5.461E+01	5.408E+00	1.738E+00		2.479E+01	1.924E+01	2.187E+02
16.00.40	5.669E+01	4.992E+00	2.484E+00		2.472E+01	1.936E+01	2.242E+02
16.00.50	5.804E+01	5.366E+00	2.691E+00		2.475E+01	1.944E+01	2.224E+02
16.01.00	5.633E+01	4.867E+00	2.980E+00		2.483E+01	1.932E+01	2.206E+02
16.01.10	5.514E+01	5.782E+00	3.643E+00		2.469E+01	1.916E+01	2.206E+02
16.01.20	5.649E+01	7.571E+00	3.312E+00		2.447E+01	1.924E+01	2.261E+02
16.01.30	5.874E+01	5.657E+00	3.726E+00		2.448E+01	1.936E+01	2.267E+02
16.01.40	5.775E+01	6.156E+00	1.945E+00		2.453E+01	1.920E+01	2.181E+02
16.01.50	5.854E+01	6.448E+00	1.366E+00		2.433E+01	1.916E+01	2.212E+02
16.02.00	5.742E+01	6.406E+00	1.614E+00		2.422E+01	1.920E+01	2.261E+02
16.02.10	5.883E+01	6.864E+00	9.936E-01		2.436E+01	1.936E+01	2.261E+02
16.02.20	5.963E+01	6.905E+00	1.242E+00		2.448E+01	1.956E+01	2.254E+02
16.02.30	5.920E+01	6.073E+00	1.035E+00		2.448E+01	1.936E+01	2.175E+02
16.02.40	5.870E+01	4.992E+00	2.442E+00		2.436E+01	1.932E+01	2.175E+02
16.02.50	5.887E+01	3.619E+00	2.194E+00		2.416E+01	1.932E+01	2.236E+02
16.03.00	5.913E+01	5.033E+00	1.821E+00		2.408E+01	1.932E+01	2.212E+02
16.03.10	5.887E+01	4.784E+00	9.108E-01		2.404E+01	1.924E+01	2.248E+02
16.03.20	5.794E+01	5.616E+00	1.780E+00		2.395E+01	1.928E+01	2.212E+02
16.03.30	6.012E+01	5.116E+00	1.614E+00		2.379E+01	1.932E+01	2.224E+02
16.03.40	6.180E+01	4.409E+00	2.318E+00		2.368E+01	1.940E+01	2.261E+02
16.03.50	5.874E+01	5.033E+00	2.566E+00		2.379E+01	1.932E+01	2.242E+02
16.04.00	5.956E+01	4.700E+00	1.283E+00		2.379E+01	1.944E+01	2.254E+02
16.04.10	5.910E+01	4.118E+00	5.796E-01		2.372E+01	1.936E+01	2.218E+02
16.04.20	6.052E+01	3.993E+00	1.904E+00		2.371E+01	1.948E+01	2.279E+02
16.04.30	6.194E+01	5.907E+00	2.608E+00		2.370E+01	1.952E+01	2.254E+02
16.04.40	6.062E+01	5.283E+00	3.726E+00		2.367E+01	1.952E+01	2.218E+02
16.04.50	6.253E+01	7.696E+00	2.773E+00		2.358E+01	1.924E+01	2.279E+02
16.05.00	6.190E+01	7.862E+00	2.359E+00		2.362E+01	1.920E+01	2.206E+02
16.05.10	6.194E+01	7.654E+00	4.098E+00		2.348E+01	1.936E+01	2.261E+02
16.05.20	6.316E+01	6.905E+00	2.773E+00		2.348E+01	1.928E+01	2.254E+02
16.05.30	6.227E+01	4.742E+00	2.359E+00		2.344E+01	1.920E+01	2.218E+02
16.05.40	6.190E+01	5.324E+00	1.697E+00		2.334E+01	1.916E+01	2.230E+02
16.05.50	6.458E+01	5.408E+00	1.821E+00		2.333E+01	1.936E+01	2.236E+02
16.06.00	6.322E+01	5.033E+00	1.531E+00		2.348E+01	1.920E+01	2.230E+02
16.06.10	6.279E+01	5.116E+00	2.277E+00		2.321E+01	1.940E+01	2.242E+02
16.06.20	6.283E+01	7.363E+00	3.643E+00		2.323E+01	1.956E+01	2.254E+02
16.06.30	6.359E+01	5.740E+00	2.939E+00		2.337E+01	1.936E+01	2.242E+02
16.06.40	6.009E+01	6.032E+00	2.194E+00		2.340E+01	1.924E+01	2.236E+02
16.06.50	6.177E+01	7.612E+00	2.815E+00		2.335E+01	1.928E+01	2.236E+02

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B5.- Continued

(a) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
16.07.00	6.048E+01	5.907E+00	3.560E+00		2.354E+01	1.912E+01	2.236E+02
16.07.10	6.303E+01	5.366E+00	3.312E+00		2.345E+01	1.912E+01	2.236E+02
16.07.20	6.217E+01	6.198E+00	2.111E+00		2.355E+01	1.904E+01	2.248E+02
16.07.30	5.963E+01	6.448E+00	2.111E+00		2.373E+01	1.896E+01	2.248E+02
16.07.40	5.841E+01	6.406E+00	2.939E+00		2.385E+01	1.944E+01	2.248E+02
16.07.50	5.626E+01	5.699E+00	2.608E+00		2.394E+01	1.976E+01	2.236E+02
16.08.00	5.418E+01	7.488E+00	2.111E+00		2.392E+01	1.980E+01	2.230E+02
16.08.10	5.362E+01	6.364E+00	3.519E+00		2.383E+01	1.956E+01	2.236E+02
16.08.20	5.438E+01	4.576E+00	2.898E+00		2.387E+01	1.956E+01	2.224E+02
16.08.30	5.421E+01	5.241E+00	2.608E+00		2.391E+01	1.960E+01	2.212E+02
16.08.40	5.256E+01	6.240E+00	1.407E+00		2.389E+01	1.960E+01	2.212E+02
16.08.50	5.322E+01	4.908E+00	2.732E+00		2.376E+01	1.940E+01	2.230E+02
16.09.00	5.672E+01	7.321E+00	4.802E+00		2.383E+01	1.960E+01	2.242E+02
16.09.10	5.375E+01	4.617E+00	3.974E+00		2.389E+01	1.988E+01	2.248E+02
16.09.20	5.065E+01	5.408E+00	2.608E+00		2.395E+01	2.000E+01	2.248E+02
16.09.30	4.959E+01	5.116E+00	3.229E+00		2.393E+01	1.996E+01	2.242E+02
16.09.40	5.233E+01	6.905E+00	4.429E+00		2.389E+01	1.988E+01	2.224E+02
16.09.50	5.247E+01	8.486E+00	4.512E+00		2.387E+01	1.988E+01	2.236E+02
16.10.00	5.115E+01	7.238E+00	2.815E+00		2.390E+01	2.004E+01	2.236E+02
16.10.10	5.016E+01	5.865E+00	2.732E+00		2.398E+01	2.008E+01	2.236E+02
16.10.20	4.725E+01	6.656E+00	2.401E+00		2.400E+01	2.012E+01	2.248E+02
16.10.30	4.629E+01	6.739E+00	2.442E+00		2.396E+01	2.008E+01	2.236E+02
16.10.40	4.725E+01	7.571E+00	2.815E+00		2.396E+01	2.008E+01	2.261E+02
16.10.50	4.738E+01	4.076E+00	2.691E+00		2.393E+01	2.004E+01	2.261E+02
16.11.00	4.745E+01	4.950E+00	2.277E+00		2.405E+01	1.992E+01	2.254E+02
16.11.10	4.577E+01	6.406E+00	1.987E+00		2.402E+01	1.996E+01	2.254E+02
16.11.20	4.725E+01	7.072E+00	2.815E+00		2.387E+01	2.004E+01	2.254E+02
16.11.30	5.134E+01	6.448E+00	1.200E+00		2.386E+01	2.008E+01	2.242E+02
16.11.40	5.062E+01	7.238E+00	1.780E+00		2.398E+01	2.000E+01	2.230E+02
16.11.50	4.662E+01	7.072E+00	2.028E+00		2.390E+01	2.008E+01	2.248E+02
16.12.00	4.874E+01	5.990E+00	1.863E+00		2.379E+01	2.012E+01	2.254E+02
16.12.10	5.052E+01	6.156E+00	2.732E+00		2.373E+01	2.008E+01	2.254E+02
16.12.20	5.197E+01	6.156E+00	1.904E+00		2.372E+01	2.000E+01	2.242E+02
16.12.30	5.082E+01	6.489E+00	8.280E-01		2.371E+01	1.996E+01	2.248E+02
16.12.40	5.197E+01	7.280E+00	9.522E-01		2.372E+01	2.004E+01	2.248E+02
16.12.50	5.042E+01	8.112E+00	7.866E-01		2.371E+01	2.008E+01	2.261E+02
16.13.00	5.273E+01	5.740E+00	8.694E-01		2.371E+01	2.016E+01	2.236E+02
16.13.10	5.237E+01	4.908E+00	1.159E+00		2.367E+01	2.024E+01	2.254E+02
16.13.20	4.976E+01	5.200E+00	7.452E-01		2.371E+01	2.028E+01	2.261E+02
16.13.30	4.900E+01	3.036E+00	1.200E+00		2.379E+01	2.016E+01	2.261E+02
16.13.40	4.755E+01	6.323E+00	1.780E+00		2.401E+01	1.980E+01	2.261E+02
16.13.50	4.088E+01	6.115E+00	2.277E+00		2.417E+01	1.964E+01	2.261E+02
16.14.00	4.161E+01	6.697E+00	2.815E+00		2.423E+01	1.964E+01	2.267E+02
16.14.10	4.075E+01	5.283E+00	2.152E+00		2.428E+01	1.976E+01	2.267E+02
16.14.20	4.095E+01	5.324E+00	2.401E+00		2.430E+01	1.964E+01	2.254E+02
16.14.30	4.352E+01	4.742E+00	1.863E+00		2.430E+01	1.900E+01	2.316E+02
16.14.40	4.181E+01	3.952E+00	8.694E-01		2.434E+01	1.956E+01	2.267E+02
16.14.50	4.062E+01	5.782E+00	1.076E+00		2.438E+01	1.916E+01	2.291E+02
16.15.00	3.870E+01	7.737E+00	4.140E-01		2.433E+01	1.780E+01	2.389E+02
16.15.10	3.913E+01	6.614E+00	1.449E+00		2.434E+01	2.012E+01	2.261E+02
16.15.20	3.798E+01	5.699E+00	3.726E-01		2.430E+01	1.984E+01	2.279E+02
16.15.30	3.804E+01	4.617E+00	2.442E+00		2.427E+01	2.032E+01	2.242E+02
16.15.40	3.999E+01	4.534E+00	1.697E+00		2.421E+01	1.952E+01	2.322E+02
16.15.50	3.861E+01	6.364E+00	6.210E-01		2.422E+01	1.936E+01	2.358E+02
16.16.00	4.042E+01	5.366E+00	4.554E-01		2.417E+01	2.052E+01	2.303E+02

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B5.- Continued

(b) Spiral at C

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
16.16.30	4.009E+01	5.865E+00	8.280E-01		2.381E+01	2.044E+01	2.798E+02
16.16.40	3.742E+01	5.948E+00	1.656E-01		2.359E+01	2.048E+01	3.141E+02
16.16.50	3.474E+01	7.321E+00	9.936E-01		2.336E+01	2.040E+01	3.422E+02
16.17.00	3.432E+01	5.616E+00	2.318E+00		2.324E+01	2.004E+01	3.648E+02
16.17.10	3.293E+01	6.656E+00	3.684E+00		2.307E+01	2.016E+01	3.856E+02
16.17.20	3.415E+01	6.531E+00	2.028E+00		2.282E+01	2.000E+01	4.118E+02
16.17.30	3.382E+01	6.073E+00	2.691E+00		2.255E+01	1.944E+01	4.460E+02
16.17.40	3.303E+01	5.907E+00	2.442E+00		2.225E+01	1.936E+01	4.766E+02
16.17.50	3.375E+01	5.865E+00	2.194E+00		2.194E+01	1.928E+01	5.059E+02
16.18.00	3.260E+01	6.697E+00	1.283E+00		2.174E+01	1.892E+01	5.347E+02
16.18.10	3.333E+01	4.784E+00	9.522E-01		2.161E+01	1.892E+01	5.664E+02
16.18.20	3.283E+01	3.619E+00	1.656E-01		2.132E+01	1.872E+01	5.982E+02
16.18.30	3.135E+01	5.200E+00	6.210E-01		2.112E+01	1.804E+01	6.282E+02
16.18.40	2.989E+01	4.867E+00	1.076E+00		2.100E+01	1.772E+01	6.550E+02
16.18.50	2.801E+01	6.531E+00	1.490E+00		2.081E+01	1.764E+01	6.832E+02
16.19.00	2.679E+01	6.281E+00	8.694E-01		2.061E+01	1.756E+01	7.100E+02
16.19.10	2.729E+01	5.033E+00	1.863E+00		2.040E+01	1.740E+01	7.388E+02
16.19.20	2.682E+01	5.948E+00	2.070E+00		2.029E+01	1.724E+01	7.693E+02
16.19.30	2.521E+01	4.492E+00	2.277E+00		2.015E+01	1.712E+01	7.980E+02
16.19.40	2.706E+01	4.659E+00	1.490E+00		1.994E+01	1.700E+01	8.255E+02
16.19.50	2.781E+01	3.910E+00	2.980E+00		1.987E+01	1.664E+01	8.506E+02
16.20.00	2.831E+01	5.283E+00	3.146E+00		1.977E+01	1.608E+01	8.763E+02
16.20.10	2.557E+01	5.283E+00	1.780E+00		1.961E+01	1.584E+01	9.007E+02
16.20.20	2.649E+01	3.328E+00	7.038E-01		1.949E+01	1.592E+01	9.209E+02
16.20.30	2.607E+01	3.993E+00	3.312E-01		1.947E+01	1.580E+01	9.429E+02
16.20.40	2.550E+01	3.161E+00	4.554E-01		1.935E+01	1.568E+01	9.691E+02
16.20.50	2.537E+01	4.201E+00	4.968E-01		1.906E+01	1.540E+01	9.985E+02
16.21.00	2.696E+01	3.452E+00	4.140E-01		1.894E+01	1.532E+01	1.022E+03
16.21.10	2.752E+01	3.744E+00	1.242E-01		1.888E+01	1.548E+01	1.048E+03
16.21.20	2.960E+01	4.076E+00	1.242E-01		1.869E+01	1.564E+01	1.074E+03
16.21.30	3.078E+01	5.491E+00	2.484E+00		1.846E+01	1.560E+01	1.099E+03
16.21.40	3.465E+01	5.865E+00	2.277E+00		1.823E+01	1.556E+01	1.123E+03
16.21.50	3.372E+01	6.406E+00	1.283E+00		1.817E+01	1.536E+01	1.145E+03
16.22.00	3.253E+01	3.993E+00	1.490E+00		1.796E+01	1.516E+01	1.170E+03
16.22.10	3.240E+01	4.284E+00	9.936E-01		1.789E+01	1.480E+01	1.193E+03
16.22.20	3.128E+01	5.990E+00	1.656E-01		1.778E+01	1.452E+01	1.225E+03
16.22.30	2.993E+01	4.160E+00	1.656E-01		1.746E+01	1.440E+01	1.260E+03
16.22.40	3.009E+01	4.201E+00	1.821E+00		1.728E+01	1.416E+01	1.292E+03
16.22.50	3.042E+01	3.785E+00	1.407E+00		1.716E+01	1.400E+01	1.321E+03
16.23.00	2.999E+01	4.867E+00	1.200E+00		1.681E+01	1.388E+01	1.361E+03
16.23.10	3.039E+01	5.283E+00	1.366E+00		1.664E+01	1.352E+01	1.392E+03
16.23.20	3.296E+01	4.992E+00	1.242E+00		1.659E+01	1.336E+01	1.414E+03
16.23.30	3.418E+01	4.617E+00	7.866E-01		1.656E+01	1.320E+01	1.433E+03
16.23.40	3.333E+01	6.156E+00	2.111E+00		1.648E+01	1.300E+01	1.453E+03
16.23.50	3.240E+01	5.241E+00	2.442E+00		1.657E+01	1.188E+01	1.480E+03
16.24.00	3.267E+01	4.825E+00	3.394E+00		1.659E+01	1.296E+01	1.487E+03
16.24.10	2.999E+01	3.577E+00	2.939E+00		1.655E+01	1.292E+01	1.506E+03
16.24.20	2.904E+01	4.160E+00	2.773E+00		1.652E+01	1.300E+01	1.530E+03
16.24.30	3.257E+01	4.243E+00	2.442E+00		1.644E+01	1.272E+01	1.559E+03
16.24.40	2.953E+01	2.371E+00	1.697E+00		1.651E+01	1.248E+01	1.586E+03

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B5.- Continued

(b) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
16.24.50	2.946E+01	3.161E+00	1.987E+00		1.671E+01	1.148E+01	1.611E+03
16.25.00	3.016E+01	4.451E+00	1.987E+00		1.684E+01	1.072E+01	1.640E+03
16.25.10	2.960E+01	4.617E+00	4.554E-01		1.683E+01	1.080E+01	1.669E+03
16.25.20	3.148E+01	4.908E+00	1.407E+00		1.684E+01	1.012E+01	1.693E+03
16.25.30	3.121E+01	4.867E+00	4.554E-01		1.676E+01	1.004E+01	1.714E+03
16.25.40	3.052E+01	4.118E+00	9.522E-01		1.661E+01	1.024E+01	1.734E+03
16.25.50	3.187E+01	4.867E+00	1.283E+00		1.646E+01	1.056E+01	1.759E+03
16.26.00	3.247E+01	4.284E+00	1.697E+00		1.640E+01	1.020E+01	1.784E+03
16.26.10	3.418E+01	4.326E+00	2.525E+00		1.635E+01	9.640E+00	1.810E+03
16.26.20	3.501E+01	4.742E+00	2.815E+00		1.618E+01	9.520E+00	1.836E+03
16.26.30	3.583E+01	6.406E+00	2.359E+00		1.607E+01	9.480E+00	1.861E+03
16.26.40	3.771E+01	4.784E+00	1.821E+00		1.603E+01	9.280E+00	1.886E+03
16.26.50	3.560E+01	5.366E+00	1.076E+00		1.606E+01	9.040E+00	1.910E+03
16.27.00	3.484E+01	5.574E+00	9.936E-01		1.604E+01	8.760E+00	1.935E+03
16.27.10	3.567E+01	4.492E+00	6.210E-01		1.603E+01	8.600E+00	1.959E+03
16.27.20	3.465E+01	3.910E+00	9.936E-01		1.597E+01	8.400E+00	1.983E+03
16.27.30	3.356E+01	5.657E+00	3.726E-01		1.599E+01	8.120E+00	2.005E+03
16.27.40	3.438E+01	2.787E+00	4.968E-01		1.593E+01	8.120E+00	2.025E+03
16.27.50	3.412E+01	3.411E+00	2.070E+00		1.583E+01	8.400E+00	2.045E+03
16.28.00	3.441E+01	4.576E+00	1.242E+00		1.569E+01	8.760E+00	2.068E+03
16.28.10	3.243E+01	4.659E+00	1.076E+00		1.545E+01	8.720E+00	2.091E+03
16.28.20	3.362E+01	6.073E+00	2.898E-01		1.524E+01	8.840E+00	2.119E+03
16.28.30	3.253E+01	6.198E+00	1.200E+00		1.495E+01	9.040E+00	2.149E+03
16.28.40	3.303E+01	6.323E+00	2.773E+00		1.468E+01	9.040E+00	2.180E+03
16.28.50	3.052E+01	4.742E+00	3.146E+00		1.447E+01	9.200E+00	2.210E+03
16.29.00	3.138E+01	4.784E+00	3.063E+00		1.421E+01	9.200E+00	2.239E+03
16.29.10	3.102E+01	5.033E+00	3.229E+00		1.402E+01	9.120E+00	2.267E+03
16.29.20	2.999E+01	6.448E+00	2.484E+00		1.424E+01	8.920E+00	2.294E+03
16.29.30	2.871E+01	5.657E+00	1.324E+00		1.430E+01	8.680E+00	2.319E+03
16.29.40	2.828E+01	6.780E+00	6.624E-01		1.422E+01	8.600E+00	2.341E+03
16.29.50	2.722E+01	5.699E+00	1.200E+00		1.411E+01	8.720E+00	2.366E+03
16.30.00	2.831E+01	5.200E+00	1.324E+00		1.384E+01	8.720E+00	2.395E+03
16.30.10	2.686E+01	4.243E+00	1.200E+00		1.354E+01	8.760E+00	2.422E+03
16.30.20	2.752E+01	5.075E+00	1.573E+00		1.326E+01	8.760E+00	2.449E+03
16.30.30	2.748E+01	6.281E+00	1.738E+00		1.318E+01	8.760E+00	2.474E+03
16.30.40	2.778E+01	4.784E+00	1.821E+00		1.312E+01	8.640E+00	2.496E+03
16.30.50	2.656E+01	5.740E+00	1.656E+00		1.321E+01	8.400E+00	2.517E+03
16.31.00	2.663E+01	7.904E+00	2.649E+00		1.336E+01	7.600E+00	2.539E+03
16.31.10	2.448E+01	7.238E+00	2.608E+00		1.343E+01	7.160E+00	2.561E+03
16.31.20	2.752E+01	7.196E+00	1.821E+00		1.337E+01	6.920E+00	2.584E+03
16.31.30	2.933E+01	6.198E+00	9.522E-01		1.320E+01	6.880E+00	2.608E+03
16.31.40	3.029E+01	6.780E+00	9.108E-01		1.327E+01	5.520E+00	2.627E+03
16.31.50	3.319E+01	6.323E+00	4.140E-02		1.330E+01	3.800E+00	2.653E+03
16.32.00	4.029E+01	3.952E+00	1.656E+00		1.316E+01	3.560E+00	2.683E+03
16.32.10	4.161E+01	3.161E+00	7.452E-01		1.313E+01	9.200E-01	2.726E+03
16.32.20	4.260E+01	5.574E+00	5.382E-01		1.294E+01	6.400E-01	2.756E+03
16.32.30	4.346E+01	5.824E+00	8.694E-01		1.296E+01	7.200E-01	2.784E+03
16.32.40	4.382E+01	6.614E+00	1.449E+00		1.285E+01	2.520E+00	2.798E+03
16.32.50	4.134E+01	8.736E+00	1.283E+00		1.275E+01	2.800E-01	2.828E+03
16.33.00	4.220E+01	7.280E+00	1.573E+00		1.267E+01	3.600E-01	2.845E+03
16.33.10	3.956E+01	6.281E+00	2.980E+00		1.252E+01	3.040E+00	2.851E+03
16.33.20	3.669E+01	6.822E+00	3.105E+00		1.221E+01	4.160E+00	2.883E+03
16.33.30	3.438E+01	6.489E+00	2.111E+00		1.197E+01	5.360E+00	2.908E+03
16.33.40	3.009E+01	3.702E+00	2.028E+00		1.181E+01	5.360E+00	2.927E+03
16.33.50	2.897E+01	4.784E+00	1.366E+00		1.173E+01	5.440E+00	2.950E+03
16.34.00	2.755E+01	5.366E+00	1.614E+00		1.150E+01	5.520E+00	2.976E+03
16.34.10	2.659E+01	5.740E+00	1.242E+00		1.137E+01	5.520E+00	2.999E+03
16.34.20	2.666E+01	5.907E+00	3.187E+00		1.170E+01	5.520E+00	2.969E+03

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B5.- Continued

(c) Leg C → A

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
16.38.00	2.692E+01	6.406E+00	2.525E+00		1.470E+01	8.800E+00	2.350E+03
16.38.10	2.620E+01	5.990E+00	2.939E+00		1.458E+01	8.760E+00	2.356E+03
16.38.20	2.772E+01	5.158E+00	1.821E+00		1.453E+01	8.720E+00	2.356E+03
16.38.30	2.709E+01	4.950E+00	1.117E+00		1.459E+01	8.640E+00	2.353E+03
16.38.40	2.857E+01	5.200E+00	9.936E-01		1.452E+01	8.600E+00	2.356E+03
16.38.50	2.686E+01	5.408E+00	5.796E-01		1.453E+01	8.560E+00	2.356E+03
16.39.00	2.805E+01	4.742E+00	1.035E+00		1.450E+01	8.560E+00	2.356E+03
16.39.10	2.768E+01	5.907E+00	4.968E-01		1.453E+01	8.520E+00	2.356E+03
16.39.20	2.864E+01	3.536E+00	1.904E+00		1.457E+01	8.480E+00	2.356E+03
16.39.30	2.666E+01	5.657E+00	5.382E-01		1.450E+01	8.600E+00	2.355E+03
16.39.40	2.841E+01	6.406E+00	4.968E-01		1.454E+01	8.560E+00	2.356E+03
16.39.50	2.884E+01	4.243E+00	4.140E-02		1.452E+01	8.600E+00	2.356E+03
16.40.00	2.636E+01	6.572E+00	6.624E-01		1.461E+01	8.640E+00	2.354E+03
16.40.10	2.755E+01	7.529E+00	1.656E-01		1.469E+01	8.760E+00	2.353E+03
16.40.20	2.867E+01	6.947E+00	1.200E+00		1.466E+01	8.720E+00	2.358E+03
16.40.30	2.775E+01	3.952E+00	9.108E-01		1.476E+01	8.760E+00	2.356E+03
16.40.40	2.907E+01	5.033E+00	1.035E+00		1.482E+01	8.840E+00	2.355E+03
16.40.50	2.669E+01	3.702E+00	0.000E+00		1.471E+01	8.840E+00	2.356E+03
16.41.00	2.508E+01	4.243E+00	2.484E-01		1.474E+01	8.880E+00	2.354E+03
16.41.10	2.814E+01	4.700E+00	3.726E-01		1.477E+01	8.880E+00	2.354E+03
16.41.20	2.775E+01	4.992E+00	3.312E-01		1.474E+01	8.840E+00	2.353E+03
16.41.30	2.805E+01	5.283E+00	1.242E-01		1.468E+01	8.800E+00	2.353E+03
16.41.40	2.666E+01	5.740E+00	2.484E-01		1.472E+01	8.760E+00	2.355E+03
16.41.50	3.012E+01	6.281E+00	7.452E-01		1.467E+01	8.760E+00	2.354E+03
16.42.00	2.735E+01	6.032E+00	2.608E+00		1.471E+01	8.760E+00	2.354E+03
16.42.10	2.973E+01	5.324E+00	2.484E+00		1.474E+01	8.720E+00	2.355E+03
16.42.20	2.907E+01	5.491E+00	1.283E+00		1.478E+01	8.720E+00	2.356E+03
16.42.30	2.857E+01	5.283E+00	2.070E+00		1.481E+01	8.680E+00	2.356E+03
16.42.40	2.910E+01	5.990E+00	1.283E+00		1.468E+01	8.960E+00	2.355E+03
16.42.50	2.659E+01	4.617E+00	6.624E-01		1.467E+01	8.960E+00	2.355E+03
16.43.00	2.847E+01	5.657E+00	1.366E+00		1.473E+01	8.920E+00	2.355E+03
16.43.10	2.884E+01	4.492E+00	1.863E+00		1.476E+01	9.000E+00	2.355E+03
16.43.20	2.468E+01	5.366E+00	3.394E+00		1.478E+01	9.000E+00	2.355E+03
16.43.30	2.577E+01	4.908E+00	3.519E+00		1.479E+01	9.040E+00	2.356E+03
16.43.40	2.570E+01	7.488E+00	9.522E-01		1.478E+01	8.960E+00	2.357E+03
16.43.50	2.752E+01	6.364E+00	2.070E-01		1.471E+01	8.960E+00	2.356E+03
16.44.00	2.669E+01	3.868E+00	8.694E-01		1.461E+01	8.920E+00	2.356E+03
16.44.10	2.557E+01	5.408E+00	1.987E+00		1.463E+01	8.880E+00	2.356E+03
16.44.20	2.785E+01	3.660E+00	3.394E+00		1.456E+01	8.960E+00	2.357E+03
16.44.30	2.854E+01	5.366E+00	3.891E+00		1.460E+01	8.960E+00	2.355E+03
16.44.40	2.593E+01	4.617E+00	3.726E+00		1.464E+01	8.960E+00	2.355E+03
16.44.50	2.900E+01	3.993E+00	4.305E+00		1.452E+01	9.040E+00	2.357E+03
16.45.00	2.735E+01	5.616E+00	2.649E+00		1.444E+01	9.200E+00	2.356E+03
16.45.10	2.696E+01	5.449E+00	6.210E-01		1.480E+01	8.280E+00	2.355E+03
16.45.20	3.059E+01	5.782E+00	5.382E-01		1.506E+01	7.320E+00	2.356E+03
16.45.30	3.306E+01	4.992E+00	8.280E-02		1.492E+01	7.760E+00	2.358E+03
16.45.40	3.240E+01	5.366E+00	3.726E-01		1.475E+01	8.320E+00	2.360E+03
16.45.50	2.983E+01	6.240E+00	1.449E+00		1.462E+01	8.560E+00	2.357E+03
16.46.00	2.937E+01	5.116E+00	1.407E+00		1.467E+01	8.240E+00	2.355E+03
16.46.10	3.151E+01	5.782E+00	1.076E+00		1.466E+01	8.320E+00	2.355E+03

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B5.- Continued

(c) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
16.46.20	3.171E+01	5.408E+00	2.484E-01		1.462E+01	8.320E+00	2.356E+03
16.46.30	3.148E+01	5.200E+00	7.452E-01		1.442E+01	8.600E+00	2.359E+03
16.46.40	3.016E+01	2.288E+00	1.200E+00		1.437E+01	8.400E+00	2.356E+03
16.46.50	2.805E+01	4.284E+00	7.038E-01		1.432E+01	8.480E+00	2.355E+03
16.47.00	3.016E+01	5.241E+00	0.000E+00		1.426E+01	8.480E+00	2.355E+03
16.47.10	2.983E+01	4.742E+00	1.076E+00		1.423E+01	8.560E+00	2.355E+03
16.47.20	3.125E+01	3.993E+00	6.210E-01		1.419E+01	8.600E+00	2.358E+03
16.47.30	3.072E+01	4.784E+00	3.726E-01		1.411E+01	8.720E+00	2.359E+03
16.47.40	3.055E+01	5.865E+00	1.159E+00		1.412E+01	8.440E+00	2.357E+03
16.47.50	3.168E+01	6.364E+00	4.140E-02		1.414E+01	8.440E+00	2.356E+03
16.48.00	3.177E+01	5.740E+00	3.726E-01		1.431E+01	8.400E+00	2.355E+03
16.48.10	3.319E+01	5.449E+00	1.738E+00		1.424E+01	8.440E+00	2.358E+03
16.48.20	3.326E+01	4.201E+00	1.614E+00		1.431E+01	8.280E+00	2.357E+03
16.48.30	3.204E+01	4.243E+00	6.210E-01		1.425E+01	8.080E+00	2.355E+03
16.48.40	3.286E+01	5.366E+00	6.624E-01		1.425E+01	8.200E+00	2.355E+03
16.48.50	3.207E+01	4.659E+00	7.038E-01		1.428E+01	8.240E+00	2.356E+03
16.49.00	3.158E+01	3.868E+00	1.449E+00		1.421E+01	8.240E+00	2.357E+03
16.49.10	3.263E+01	3.286E+00	1.407E+00		1.417E+01	8.040E+00	2.358E+03
16.49.20	3.177E+01	4.451E+00	9.936E-01		1.418E+01	7.640E+00	2.356E+03
16.49.30	3.369E+01	4.160E+00	1.035E+00		1.410E+01	7.960E+00	2.357E+03
16.49.40	3.339E+01	2.953E+00	1.035E+00		1.410E+01	7.800E+00	2.355E+03
16.49.50	3.210E+01	4.409E+00	1.407E+00		1.392E+01	7.800E+00	2.354E+03
16.50.00	3.392E+01	5.033E+00	4.140E-02		1.393E+01	7.760E+00	2.355E+03
16.50.10	3.197E+01	6.281E+00	1.242E-01		1.395E+01	7.800E+00	2.352E+03
16.50.20	3.217E+01	6.905E+00	7.038E-01		1.413E+01	7.600E+00	2.354E+03
16.50.30	3.217E+01	6.198E+00	1.076E+00		1.415E+01	7.360E+00	2.354E+03
16.50.40	3.243E+01	6.864E+00	5.382E-01		1.402E+01	7.960E+00	2.353E+03
16.50.50	3.187E+01	4.035E+00	1.242E-01		1.404E+01	7.720E+00	2.355E+03
16.51.00	3.276E+01	5.116E+00	7.866E-01		1.424E+01	7.040E+00	2.357E+03
16.51.10	3.237E+01	6.281E+00	4.140E-02		1.413E+01	7.200E+00	2.353E+03
16.51.20	3.144E+01	5.491E+00	1.076E+00		1.407E+01	6.880E+00	2.354E+03
16.51.30	3.191E+01	5.283E+00	1.366E+00		1.423E+01	7.160E+00	2.326E+03

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B5.- Continued

(d) Spiral at A

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
16.51.30	3.191E+01	5.283E+00	1.366E+00		1.423E+01	7.160E+00	2.326E+03
16.51.40	3.253E+01	4.284E+00	1.656E-01		1.419E+01	7.800E+00	2.307E+03
16.51.50	3.323E+01	5.824E+00	1.076E+00		1.410E+01	8.360E+00	2.296E+03
16.52.00	3.323E+01	6.864E+00	2.070E-01		1.395E+01	8.360E+00	2.282E+03
16.52.10	3.171E+01	6.489E+00	1.324E+00		1.422E+01	8.200E+00	2.254E+03
16.52.20	3.514E+01	6.240E+00	1.242E-01		1.435E+01	7.840E+00	2.228E+03
16.52.30	3.620E+01	5.990E+00	4.140E-01		1.464E+01	8.480E+00	2.209E+03
16.52.40	3.441E+01	6.905E+00	4.140E-02		1.475E+01	8.480E+00	2.186E+03
16.52.50	3.540E+01	7.155E+00	1.531E+00		1.502E+01	8.800E+00	2.165E+03
16.53.00	3.465E+01	4.742E+00	1.242E-01		1.516E+01	8.160E+00	2.147E+03
16.53.10	3.564E+01	7.862E+00	6.624E-01		1.521E+01	7.640E+00	2.124E+03
16.53.20	3.590E+01	5.491E+00	2.898E-01		1.540E+01	7.680E+00	2.095E+03
16.53.30	3.633E+01	5.324E+00	3.312E-01		1.574E+01	7.800E+00	2.059E+03
16.53.40	3.560E+01	3.494E+00	1.738E+00		1.589E+01	8.160E+00	2.023E+03
16.53.50	3.488E+01	4.160E+00	3.643E+00		1.610E+01	8.440E+00	1.990E+03
16.54.00	3.573E+01	5.075E+00	3.477E+00		1.636E+01	8.520E+00	1.962E+03
16.54.10	3.458E+01	4.617E+00	1.283E+00		1.651E+01	8.600E+00	1.937E+03
16.54.20	3.511E+01	4.659E+00	1.656E+00		1.627E+01	7.520E+00	1.914E+03
16.54.30	4.570E+01	6.905E+00	1.697E+00		1.645E+01	6.680E+00	1.888E+03
16.54.40	4.801E+01	5.865E+00	1.945E+00		1.661E+01	6.960E+00	1.860E+03
16.54.50	4.877E+01	7.113E+00	4.140E-01		1.666E+01	8.400E+00	1.830E+03
16.55.00	4.527E+01	5.616E+00	2.111E+00		1.674E+01	9.400E+00	1.796E+03
16.55.10	4.167E+01	5.408E+00	3.063E+00		1.661E+01	9.160E+00	1.769E+03
16.55.20	4.319E+01	5.824E+00	1.200E+00		1.643E+01	8.400E+00	1.747E+03
16.55.30	4.765E+01	3.660E+00	4.554E-01		1.673E+01	8.000E+00	1.725E+03
16.55.40	4.999E+01	8.736E-01	8.280E-01		1.684E+01	8.400E+00	1.700E+03
16.55.50	5.039E+01	2.912E+00	2.691E+00		1.693E+01	8.280E+00	1.676E+03
16.56.00	5.174E+01	1.456E+00	2.980E+00		1.653E+01	9.600E+00	1.654E+03
16.56.10	4.785E+01	1.331E+00	2.525E+00		1.666E+01	1.004E+01	1.629E+03
16.56.20	4.732E+01	1.206E+00	2.732E+00		1.674E+01	1.040E+01	1.605E+03
16.56.30	4.511E+01	9.152E-01	4.015E+00		1.664E+01	1.152E+01	1.583E+03
16.56.40	4.257E+01	5.408E-01	4.140E+00		1.684E+01	1.140E+01	1.562E+03
16.56.50	4.257E+01	1.206E+00	2.773E+00		1.699E+01	1.172E+01	1.539E+03
16.57.00	3.818E+01	1.248E-01	2.815E+00		1.716E+01	1.180E+01	1.520E+03
16.57.10	4.045E+01	1.248E+00	2.359E+00		1.729E+01	1.220E+01	1.496E+03
16.57.20	3.884E+01	4.284E+00	2.898E+00		1.736E+01	1.224E+01	1.473E+03
16.57.30	3.828E+01	9.984E-01	1.697E+00		1.753E+01	1.244E+01	1.451E+03
16.57.40	3.828E+01	9.568E-01	3.850E+00		1.792E+01	1.224E+01	1.422E+03
16.57.50	3.940E+01	1.664E-01	5.837E+00		1.790E+01	1.292E+01	1.382E+03
16.58.00	3.771E+01	2.745E+00	5.506E+00		1.788E+01	1.344E+01	1.348E+03
16.58.10	3.672E+01	4.992E-01	5.050E+00		1.794E+01	1.380E+01	1.315E+03
16.58.20	3.755E+01	9.568E-01	5.506E+00		1.812E+01	1.400E+01	1.284E+03
16.58.30	3.616E+01	1.081E+00	5.754E+00		1.816E+01	1.428E+01	1.253E+03
16.58.40	3.745E+01	1.372E+00	6.665E+00		1.822E+01	1.448E+01	1.228E+03
16.58.50	3.597E+01	1.664E-01	4.968E+00		1.820E+01	1.476E+01	1.204E+03
16.59.00	3.412E+01	7.488E-01	3.891E+00		1.834E+01	1.480E+01	1.181E+03
16.59.10	3.738E+01	7.904E-01	3.394E+00		1.846E+01	1.488E+01	1.160E+03
16.59.20	3.692E+01	2.038E+00	3.063E+00		1.852E+01	1.512E+01	1.139E+03
16.59.30	3.643E+01	1.331E+00	3.726E+00		1.862E+01	1.528E+01	1.119E+03
16.59.40	3.804E+01	2.912E-01	2.980E+00		1.896E+01	1.512E+01	1.098E+03

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B5.- Concluded

(d) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
16.59.50	3.666E+01	4.160E-02	-2.194E+00		1.901E+01	1.524E+01	1.077E+03
17.00.00	3.709E+01	4.160E-02	-4.388E+00		1.914E+01	1.540E+01	1.052E+03
17.00.10	3.831E+01	1.372E+00	-4.305E+00		1.939E+01	1.556E+01	1.022E+03
17.00.20	4.029E+01	1.414E+00	-3.726E+00		1.984E+01	1.540E+01	9.948E+02
17.00.30	3.804E+01	4.576E-01	-4.222E+00		1.988E+01	1.568E+01	9.740E+02
17.00.40	4.171E+01	2.080E+00	-3.726E+00		1.989E+01	1.580E+01	9.600E+02
17.00.50	4.049E+01	1.830E+00	-5.713E+00		2.008E+01	1.584E+01	9.374E+02
17.01.00	4.210E+01	1.289E+00	-5.382E+00		2.032E+01	1.596E+01	9.111E+02
17.01.10	4.039E+01	4.160E-02	-4.968E+00		2.052E+01	1.608E+01	8.866E+02
17.01.20	3.943E+01	2.704E+00	-5.092E+00		2.059E+01	1.628E+01	8.628E+02
17.01.30	3.907E+01	1.872E+00	-5.589E+00		2.051E+01	1.656E+01	8.414E+02
17.01.40	4.167E+01	2.496E+00	-5.713E+00		2.063E+01	1.676E+01	8.145E+02
17.01.50	4.151E+01	1.955E+00	-3.684E+00		2.089E+01	1.692E+01	7.785E+02
17.02.00	4.224E+01	2.579E+00	-3.643E+00		2.093E+01	1.704E+01	7.528E+02
17.02.10	4.332E+01	3.328E+00	-3.063E+00		2.076E+01	1.728E+01	7.430E+02
17.02.20	4.296E+01	3.744E-01	-3.477E+00		2.124E+01	1.704E+01	7.186E+02
17.02.30	4.062E+01	4.576E-01	-4.181E+00		2.171E+01	1.696E+01	6.893E+02
17.02.40	4.072E+01	2.080E-01	-5.092E+00		2.202E+01	1.696E+01	6.599E+02
17.02.50	4.326E+01	7.072E-01	-4.305E+00		2.234E+01	1.688E+01	6.300E+02
17.03.00	4.379E+01	1.040E+00	-4.802E+00		2.241E+01	1.736E+01	5.994E+02
17.03.10	4.554E+01	9.152E-01	-2.939E+00		2.276E+01	1.776E+01	5.646E+02
17.03.20	4.715E+01	8.736E-01	-3.022E+00		2.270E+01	1.844E+01	5.383E+02
17.03.30	5.210E+01	6.240E-01	-3.312E+00		2.266E+01	1.892E+01	5.194E+02
17.03.40	5.101E+01	2.995E+00	-3.353E+00		2.270E+01	1.908E+01	5.047E+02
17.03.50	5.214E+01	5.324E+00	-2.194E+00		2.285E+01	1.880E+01	4.845E+02
17.04.00	5.075E+01	2.704E+00	-4.388E+00		2.284E+01	1.856E+01	4.693E+02
17.04.10	5.035E+01	1.123E+00	-6.044E+00		2.308E+01	1.832E+01	4.534E+02
17.04.20	4.930E+01	1.040E+00	-6.789E+00		2.319E+01	1.924E+01	4.326E+02
17.04.30	5.346E+01	1.289E+00	-7.162E+00		2.325E+01	1.940E+01	4.100E+02
17.04.40	5.355E+01	6.656E-01	-5.796E+00		2.357E+01	1.940E+01	3.813E+02
17.04.50	5.313E+01	4.160E-02	-6.375E+00		2.377E+01	1.940E+01	3.544E+02
17.05.00	5.365E+01	4.992E-01	-6.127E+00		2.420E+01	1.924E+01	3.165E+02
17.05.10	5.487E+01	3.744E-01	-5.713E+00		2.454E+01	1.944E+01	2.835E+02
17.05.20	5.494E+01	7.072E-01	-5.092E+00		2.453E+01	1.960E+01	2.707E+02
17.05.30	5.656E+01	7.072E-01	-4.429E+00		2.467E+01	1.960E+01	2.572E+02
17.05.40	5.560E+01	2.038E+00	-4.181E+00		2.496E+01	1.972E+01	2.358E+02
17.05.50	5.520E+01	2.953E+00	-3.436E+00		2.492E+01	1.964E+01	2.206E+02
17.06.00	5.524E+01	9.568E-01	-4.057E+00		2.528E+01	1.952E+01	1.924E+02
17.06.10	5.454E+01	1.996E+00	-3.477E+00		2.569E+01	1.956E+01	1.625E+02
17.06.20	5.408E+01	1.664E+00	-3.312E+00		2.598E+01	1.984E+01	1.399E+02
17.06.30	5.435E+01	4.160E-01	-3.643E+00		2.614E+01	1.968E+01	1.240E+02
17.06.40	5.425E+01	5.408E-01	-3.726E+00		2.611E+01	1.980E+01	1.283E+02
17.06.50	5.375E+01	9.568E-01	-4.140E+00		2.606E+01	1.976E+01	1.197E+02
17.07.00	5.679E+01	1.040E+00	-3.312E+00		2.635E+01	1.972E+01	9.594E+01
17.07.10	5.593E+01	4.576E-01	-5.754E+00		2.652E+01	1.996E+01	9.227E+01
17.07.20	5.577E+01	1.872E+00	-6.003E+00		2.636E+01	1.976E+01	8.921E+01
17.07.30	5.435E+01	4.992E-01	-6.334E+00		2.649E+01	1.976E+01	6.905E+01
17.07.40	5.685E+01	3.744E-01	-5.257E+00		2.651E+01	1.964E+01	7.210E+01
17.07.50	5.431E+01	9.984E-01	-3.726E+00		2.664E+01	2.000E+01	7.272E+01
17.08.00	5.342E+01	0.000E+00	-5.464E+00		2.667E+01	1.988E+01	6.783E+01

*CH₄ instrument not operated during the experiment.

APPENDIX B

TABLE B6.- AIRCRAFT DATA FOR PRIMARY EXPERIMENT ON JULY 21, 1978

(a) Spiral at L

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
13.04.30	2.805E+01	9.193E+00	7.948E+00		2.608E+01	2.176E+01	9.105E+01
13.04.40	2.801E+01	7.321E+00	1.072E+01		2.573E+01	2.048E+01	1.313E+02
13.04.50	2.715E+01	9.568E+00	8.445E+00		2.542E+01	2.056E+01	1.729E+02
13.05.00	2.940E+01	8.777E+00	8.404E+00		2.554E+01	2.084E+01	1.900E+02
13.05.10	3.055E+01	8.278E+00	8.404E+00		2.537E+01	1.872E+01	2.261E+02
13.05.20	2.979E+01	6.489E+00	1.126E+01		2.536E+01	1.656E+01	2.523E+02
13.05.30	3.108E+01	4.035E+00	1.506E+01		2.581E+01	1.696E+01	2.633E+02
13.05.40	3.597E+01	6.822E+00	1.039E+01		2.576E+01	1.660E+01	2.951E+02
13.05.50	3.639E+01	6.281E+00	9.190E+00		2.559E+01	1.928E+01	3.128E+02
13.06.00	3.808E+01	6.032E+00	8.818E+00		2.529E+01	1.964E+01	3.501E+02
13.06.10	3.468E+01	6.032E+00	6.996E+00		2.503E+01	1.928E+01	3.868E+02
13.06.20	3.567E+01	6.739E+00	7.162E+00		2.486E+01	1.908E+01	4.149E+02
13.06.30	3.943E+01	7.280E+00	7.245E+00		2.467E+01	1.884E+01	4.424E+02
13.06.40	4.959E+01	8.486E+00	1.126E+01		2.421E+01	2.024E+01	4.503E+02
13.06.50	5.484E+01	7.904E+00	6.044E+00		2.501E+01	1.808E+01	5.157E+02
13.07.00	6.167E+01	7.529E+00	7.162E+00		2.451E+01	1.668E+01	5.243E+02
13.07.10	6.372E+01	6.614E+00	6.334E+00		2.425E+01	1.768E+01	5.560E+02
13.07.20	6.088E+01	6.489E+00	6.706E+00		2.411E+01	1.720E+01	5.860E+02
13.07.30	6.659E+01	6.073E+00	6.582E+00		2.394E+01	1.664E+01	6.165E+02
13.07.40	7.573E+01	5.408E+00	9.232E+00		2.375E+01	1.600E+01	6.453E+02
13.07.50	7.768E+01	4.409E+00	1.072E+01		2.358E+01	1.572E+01	6.728E+02
13.08.00	7.913E+01	5.033E+00	1.159E+01		2.341E+01	1.520E+01	7.009E+02
13.08.10	8.573E+01	5.990E+00	9.439E+00		2.318E+01	1.576E+01	7.278E+02
13.08.20	9.081E+01	7.113E+00	9.025E+00		2.287E+01	1.600E+01	7.589E+02
13.08.30	8.949E+01	6.739E+00	9.480E+00		2.255E+01	1.608E+01	7.907E+02
13.08.40	8.972E+01	6.947E+00	9.936E+00		2.219E+01	1.576E+01	8.268E+02
13.08.50	8.919E+01	7.196E+00	9.480E+00		2.203E+01	1.488E+01	8.549E+02
13.09.00	8.606E+01	5.990E+00	1.055E+01		2.184E+01	1.448E+01	8.818E+02
13.09.10	8.619E+01	5.532E+00	1.196E+01		2.164E+01	1.424E+01	9.086E+02
13.09.20	8.098E+01	6.032E+00	1.179E+01		2.148E+01	1.372E+01	9.374E+02
13.09.30	7.718E+01	7.612E+00	9.149E+00		2.130E+01	1.396E+01	9.618E+02
13.09.40	7.636E+01	7.155E+00	8.611E+00		2.110E+01	1.260E+01	9.936E+02
13.09.50	7.629E+01	6.739E+00	7.410E+00		2.090E+01	1.372E+01	1.014E+03
13.10.00	8.104E+01	5.948E+00	7.700E+00		2.077E+01	1.400E+01	1.035E+03
13.10.10	8.543E+01	6.240E+00	7.783E+00		2.059E+01	1.388E+01	1.058E+03
13.10.20	8.616E+01	5.824E+00	7.907E+00		2.039E+01	1.384E+01	1.083E+03
13.10.30	8.190E+01	6.281E+00	8.528E+00		2.015E+01	1.392E+01	1.110E+03
13.10.40	8.279E+01	7.820E+00	8.942E+00		1.993E+01	1.404E+01	1.135E+03
13.10.50	8.243E+01	7.612E+00	9.646E+00		1.972E+01	1.408E+01	1.161E+03
13.11.00	7.540E+01	7.280E+00	8.114E+00		1.953E+01	1.352E+01	1.187E+03
13.11.10	6.824E+01	8.278E+00	9.025E+00		1.937E+01	1.292E+01	1.214E+03
13.11.20	6.174E+01	7.820E+00	9.273E+00		1.918E+01	1.292E+01	1.242E+03
13.11.30	6.339E+01	6.364E+00	9.315E+00		1.900E+01	1.236E+01	1.273E+03
13.11.40	6.108E+01	7.862E+00	9.563E+00		1.875E+01	1.176E+01	1.307E+03
13.11.50	5.940E+01	6.988E+00	9.025E+00		1.860E+01	1.100E+01	1.336E+03
13.12.00	5.669E+01	7.488E+00	8.404E+00		1.847E+01	1.068E+01	1.363E+03
13.12.10	5.468E+01	7.820E+00	8.114E+00		1.851E+01	8.840E+00	1.388E+03
13.12.20	5.082E+01	7.321E+00	7.700E+00		1.848E+01	7.920E+00	1.414E+03
13.12.30	5.068E+01	7.820E+00	6.831E+00		1.838E+01	7.320E+00	1.436E+03
13.12.40	5.220E+01	7.488E+00	7.576E+00		1.829E+01	7.400E+00	1.464E+03
13.12.50	5.082E+01	8.028E+00	6.458E+00		1.832E+01	6.520E+00	1.494E+03
13.13.00	5.240E+01	7.820E+00	6.375E+00		1.873E+01	0.000E+00	1.523E+03

*No data due to instrument malfunction.

APPENDIX B

TABLE B6.- Continued

(b) Leg H → G

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{ap} , °C	h, m
13.24.30	5.164E+01	7.488E+00	1.353E+01		2.398E+01	1.924E+01	5.334E+02
13.24.40	5.210E+01	7.196E+00	1.374E+01		2.412E+01	1.928E+01	5.316E+02
13.24.50	5.567E+01	7.488E+00	1.428E+01		2.415E+01	1.920E+01	5.328E+02
13.25.00	5.933E+01	7.363E+00	1.548E+01		2.426E+01	1.848E+01	5.292E+02
13.25.10	6.039E+01	8.403E+00	1.420E+01		2.428E+01	1.896E+01	5.328E+02
13.25.20	6.695E+01	8.444E+00	1.349E+01		2.429E+01	1.896E+01	5.316E+02
13.25.30	6.250E+01	7.820E+00	1.606E+01		2.426E+01	1.764E+01	5.316E+02
13.25.40	6.322E+01	7.072E+00	1.250E+01		2.427E+01	1.888E+01	5.328E+02
13.25.50	6.339E+01	8.819E+00	1.312E+01		2.431E+01	1.884E+01	5.328E+02
13.26.00	6.369E+01	8.819E+00	1.155E+01		2.437E+01	1.880E+01	5.316E+02
13.26.10	6.867E+01	7.904E+00	1.208E+01		2.441E+01	1.856E+01	5.310E+02
13.26.20	6.791E+01	8.819E+00	1.039E+01		2.449E+01	1.832E+01	5.304E+02
13.26.30	6.817E+01	7.280E+00	9.604E+00		2.447E+01	1.856E+01	5.310E+02
13.26.40	6.362E+01	6.739E+00	1.092E+01		2.449E+01	1.852E+01	5.304E+02
13.26.50	6.144E+01	6.822E+00	1.047E+01		2.458E+01	1.812E+01	5.279E+02
13.27.00	6.712E+01	7.404E+00	9.894E+00		2.458E+01	1.784E+01	5.304E+02
13.27.10	7.042E+01	8.112E+00	9.480E+00		2.458E+01	1.768E+01	5.310E+02
13.27.20	7.491E+01	8.528E+00	1.109E+01		2.458E+01	1.780E+01	5.310E+02
13.27.30	7.487E+01	8.902E+00	1.113E+01		2.466E+01	1.752E+01	5.298E+02
13.27.40	7.702E+01	7.155E+00	1.088E+01		2.463E+01	1.776E+01	5.292E+02
13.27.50	7.326E+01	7.571E+00	1.188E+01		2.458E+01	1.804E+01	5.304E+02
13.28.00	7.078E+01	7.737E+00	1.188E+01		2.454E+01	1.808E+01	5.304E+02
13.28.10	7.124E+01	8.278E+00	1.035E+01		2.453E+01	1.788E+01	5.310E+02
13.28.20	7.071E+01	7.196E+00	8.155E+00		2.458E+01	1.760E+01	5.304E+02
13.28.30	7.302E+01	7.238E+00	8.528E+00		2.468E+01	1.712E+01	5.310E+02
13.28.40	8.438E+01	6.281E+00	8.694E+00		2.478E+01	1.704E+01	5.322E+02
13.28.50	8.309E+01	7.779E+00	8.694E+00		2.484E+01	1.688E+01	5.322E+02
13.29.00	8.873E+01	7.820E+00	8.694E+00		2.488E+01	1.672E+01	5.316E+02
13.29.10	9.088E+01	4.284E+00	9.977E+00		2.492E+01	1.636E+01	5.304E+02
13.29.20	9.124E+01	6.198E+00	1.039E+01		2.494E+01	1.660E+01	5.310E+02
13.29.30	8.834E+01	5.990E+00	1.188E+01		2.495E+01	1.548E+01	5.310E+02
13.29.40	8.728E+01	4.742E+00	1.589E+01		2.497E+01	1.392E+01	5.304E+02
13.29.50	8.481E+01	3.619E+00	1.635E+01		2.501E+01	1.420E+01	5.292E+02
13.30.00	8.335E+01	8.070E+00	1.117E+01		2.502E+01	1.652E+01	5.304E+02
13.30.10	8.256E+01	8.320E+00	9.853E+00		2.502E+01	1.676E+01	5.328E+02
13.30.20	8.345E+01	6.323E+00	9.356E+00		2.503E+01	1.664E+01	5.304E+02
13.30.30	8.596E+01	6.032E+00	1.155E+01		2.503E+01	1.536E+01	5.304E+02
13.30.40	8.523E+01	7.363E+00	9.687E+00		2.505E+01	1.648E+01	5.322E+02
13.30.50	8.431E+01	7.862E+00	9.936E+00		2.509E+01	1.648E+01	5.285E+02
13.31.00	8.319E+01	7.363E+00	9.522E+00		2.523E+01	1.640E+01	5.298E+02
13.31.10	9.098E+01	5.616E+00	9.563E+00		2.533E+01	1.600E+01	5.304E+02
13.31.20	9.774E+01	6.448E+00	9.811E+00		2.535E+01	1.588E+01	5.310E+02
13.31.30	1.027E+02	7.904E+00	1.121E+01		2.539E+01	1.564E+01	5.322E+02
13.31.40	1.047E+02	7.737E+00	1.155E+01		2.544E+01	1.560E+01	5.298E+02
13.31.50	1.089E+02	8.278E+00	1.097E+01		2.527E+01	1.620E+01	5.298E+02
13.32.00	9.530E+01	6.531E+00	1.026E+01		2.516E+01	1.624E+01	5.322E+02
13.32.10	9.141E+01	7.529E+00	9.687E+00		2.516E+01	1.652E+01	5.298E+02
13.32.20	8.877E+01	7.196E+00	1.051E+01		2.509E+01	1.664E+01	5.310E+02
13.32.30	8.837E+01	8.611E+00	9.811E+00		2.498E+01	1.596E+01	5.328E+02
13.32.40	8.774E+01	6.281E+00	1.279E+01		2.498E+01	1.360E+01	5.334E+02

*No data due to instrument malfunction.

TABLE B6.- Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
13.32.50	8.844E+01	5.740E+00	1.250E+01		2.509E+01	1.540E+01	5.316E+02
13.33.00	9.058E+01	6.198E+00	1.254E+01		2.504E+01	1.584E+01	5.304E+02
13.33.10	8.758E+01	7.113E+00	1.196E+01		2.522E+01	1.556E+01	5.334E+02
13.33.20	9.820E+01	7.280E+00	1.237E+01		2.531E+01	1.560E+01	5.316E+02
13.33.30	1.018E+02	5.824E+00	1.283E+01		2.515E+01	1.628E+01	5.316E+02
13.33.40	9.256E+01	5.782E+00	1.105E+01		2.525E+01	1.580E+01	5.316E+02
13.33.50	9.612E+01	7.779E+00	1.134E+01		2.530E+01	1.556E+01	5.322E+02
13.34.00	1.005E+02	8.652E+00	1.010E+01		2.529E+01	1.588E+01	5.304E+02
13.34.10	9.698E+01	9.068E+00	1.092E+01		2.519E+01	1.552E+01	5.304E+02
13.34.20	9.187E+01	7.488E+00	8.238E+00		2.525E+01	1.580E+01	5.328E+02
13.34.30	9.652E+01	6.198E+00	9.729E+00		2.531E+01	1.572E+01	5.304E+02
13.34.40	9.916E+01	4.659E+00	1.006E+01		2.538E+01	1.540E+01	5.298E+02
13.34.50	1.039E+02	8.195E+00	9.977E+00		2.532E+01	1.568E+01	5.310E+02
13.35.00	9.685E+01	9.484E+00	9.397E+00		2.529E+01	1.556E+01	5.334E+02
13.35.10	9.906E+01	7.363E+00	8.487E+00		2.529E+01	1.552E+01	5.334E+02
13.35.20	1.011E+02	9.152E+00	9.729E+00		2.524E+01	1.584E+01	5.322E+02
13.35.30	9.834E+01	8.985E+00	1.117E+01		2.524E+01	1.568E+01	5.334E+02
13.35.40	9.461E+01	8.569E+00	8.776E+00		2.521E+01	1.568E+01	5.334E+02
13.35.50	9.517E+01	5.616E+00	1.204E+01		2.525E+01	1.348E+01	5.322E+02
13.36.00	9.946E+01	6.531E+00	1.059E+01		2.531E+01	1.512E+01	5.322E+02
13.36.10	1.105E+02	7.529E+00	1.121E+01		2.526E+01	1.504E+01	5.353E+02

82

APPENDIX B

TABLE B6.- Continued

(c) Spiral at E

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
13.48.10	6.444E+01	8.611E+00	1.275E+01		2.758E+01	1.964E+01	1.264E+02
13.48.20	6.636E+01	8.944E+00	1.184E+01		2.716E+01	1.928E+01	1.741E+02
13.48.30	6.286E+01	8.361E+00	1.126E+01		2.666E+01	1.908E+01	2.224E+02
13.48.40	6.349E+01	1.073E+01	1.188E+01		2.654E+01	1.864E+01	2.481E+02
13.48.50	6.039E+01	1.027E+01	1.126E+01		2.642E+01	1.924E+01	2.682E+02
13.49.00	5.834E+01	9.443E+00	1.084E+01		2.615E+01	1.884E+01	3.024E+02
13.49.10	6.781E+01	9.942E+00	8.528E+00		2.603E+01	1.652E+01	3.379E+02
13.49.20	7.144E+01	8.694E+00	7.741E+00		2.604E+01	1.708E+01	3.660E+02
13.49.30	6.933E+01	9.401E+00	8.031E+00		2.586E+01	1.632E+01	4.014E+02
13.49.40	7.454E+01	7.696E+00	8.445E+00		2.567E+01	1.556E+01	4.357E+02
13.49.50	7.896E+01	6.988E+00	7.203E+00		2.543E+01	1.532E+01	4.687E+02
13.50.00	8.177E+01	5.449E+00	7.203E+00		2.520E+01	1.512E+01	5.047E+02
13.50.10	8.236E+01	7.612E+00	9.190E+00		2.486E+01	1.520E+01	5.420E+02
13.50.20	8.352E+01	8.112E+00	9.480E+00		2.462E+01	1.316E+01	5.725E+02
13.50.30	8.418E+01	7.072E+00	1.018E+01		2.436E+01	1.508E+01	6.007E+02
13.50.40	8.599E+01	7.238E+00	8.983E+00		2.433E+01	1.432E+01	6.245E+02
13.50.50	8.791E+01	9.068E+00	9.811E+00		2.413E+01	1.432E+01	6.471E+02
13.51.00	8.451E+01	8.153E+00	8.611E+00		2.379E+01	1.444E+01	6.777E+02
13.51.10	8.517E+01	5.324E+00	7.534E+00		2.362E+01	1.404E+01	7.064E+02
13.51.20	8.741E+01	5.657E+00	7.824E+00		2.347E+01	1.364E+01	7.320E+02
13.51.30	8.626E+01	7.280E+00	7.824E+00		2.335E+01	1.308E+01	7.553E+02
13.51.40	8.121E+01	8.486E+00	8.652E+00		2.319E+01	1.304E+01	7.785E+02
13.51.50	8.091E+01	8.860E+00	7.534E+00		2.294E+01	1.320E+01	8.054E+02
13.52.00	8.751E+01	7.987E+00	7.534E+00		2.263E+01	1.332E+01	8.341E+02
13.52.10	9.332E+01	9.484E+00	7.369E+00		2.234E+01	1.328E+01	8.628E+02
13.52.20	8.939E+01	1.060E+01	8.073E+00		2.208E+01	1.312E+01	8.903E+02
13.52.30	8.118E+01	8.985E+00	8.569E+00		2.182E+01	1.328E+01	9.141E+02
13.52.40	8.563E+01	7.155E+00	9.356E+00		2.157E+01	1.316E+01	9.416E+02
13.52.50	8.474E+01	6.531E+00	9.563E+00		2.158E+01	1.084E+01	9.716E+02
13.53.00	7.781E+01	7.737E+00	9.936E+00		2.142E+01	9.160E+00	1.004E+03
13.53.10	7.151E+01	8.361E+00	8.238E+00		2.133E+01	6.920E+00	1.040E+03
13.53.20	6.788E+01	1.006E+01	7.452E+00		2.121E+01	5.240E+00	1.075E+03
13.53.30	6.659E+01	7.779E+00	8.735E+00		2.125E+01	3.600E+00	1.103E+03
13.53.40	6.375E+01	5.782E+00	7.079E+00		2.170E+01	-1.160E+00	1.133E+03
13.53.50	6.088E+01	8.611E+00	7.824E+00		2.184E+01	-5.240E+00	1.164E+03
13.54.00	5.474E+01	7.488E+00	8.694E+00		2.201E+01	-8.800E+00	1.195E+03
13.54.10	5.788E+01	7.945E+00	8.611E+00		2.209E+01	-1.032E+01	1.226E+03
13.54.20	6.167E+01	8.153E+00	8.031E+00		2.202E+01	-1.208E+01	1.257E+03
13.54.30	5.867E+01	7.363E+00	5.920E+00		2.195E+01	-1.220E+01	1.287E+03
13.54.40	6.045E+01	8.236E+00	4.843E+00		2.174E+01	-1.236E+01	1.316E+03
13.54.50	5.887E+01	6.115E+00	7.452E+00		2.157E+01	-1.276E+01	1.344E+03
13.55.00	5.633E+01	5.158E+00	6.706E+00		2.143E+01	-1.304E+01	1.370E+03
13.55.10	6.141E+01	7.612E+00	5.961E+00		2.124E+01	-1.324E+01	1.395E+03
13.55.20	5.986E+01	7.779E+00	7.245E+00		2.104E+01	-1.336E+01	1.423E+03
13.55.30	5.956E+01	8.236E+00	7.493E+00		2.082E+01	-1.344E+01	1.451E+03
13.55.40	6.012E+01	8.195E+00	7.369E+00		2.071E+01	-1.352E+01	1.473E+03
13.55.50	5.926E+01	8.528E+00	7.079E+00		2.115E+01	-1.356E+01	1.439E+03

*No data due to instrument malfunction.

APPENDIX B

TABLE B6.- Continued

(d) Leg E → F

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
14.02.00	7.240E+01	8.902E+00	8.073E+00		2.502E+01	1.536E+01	5.402E+02
14.02.10	7.504E+01	8.112E+00	8.487E+00		2.499E+01	1.364E+01	5.402E+02
14.02.20	7.728E+01	9.900E+00	8.114E+00		2.487E+01	1.532E+01	5.444E+02
14.02.30	7.557E+01	9.817E+00	9.149E+00		2.496E+01	1.508E+01	5.408E+02
14.02.40	7.850E+01	7.737E+00	9.977E+00		2.508E+01	1.348E+01	5.426E+02
14.02.50	8.236E+01	7.737E+00	8.776E+00		2.509E+01	1.440E+01	5.420E+02
14.03.00	8.233E+01	7.862E+00	7.327E+00		2.512E+01	1.480E+01	5.402E+02
14.03.10	8.220E+01	1.102E+01	7.162E+00		2.514E+01	1.480E+01	5.420E+02
14.03.20	8.547E+01	9.110E+00	7.824E+00		2.513E+01	1.488E+01	5.426E+02
14.03.30	8.362E+01	9.193E+00	9.025E+00		2.516E+01	1.504E+01	5.402E+02
14.03.40	8.259E+01	7.820E+00	8.694E+00		2.514E+01	1.508E+01	5.402E+02
14.03.50	8.537E+01	8.153E+00	9.729E+00		2.515E+01	1.512E+01	5.389E+02
14.04.00	8.487E+01	9.692E+00	9.770E+00		2.517E+01	1.504E+01	5.383E+02
14.04.10	8.441E+01	8.361E+00	8.776E+00		2.519E+01	1.500E+01	5.383E+02
14.04.20	8.712E+01	7.696E+00	8.652E+00		2.515E+01	1.496E+01	5.402E+02
14.04.30	8.695E+01	7.280E+00	6.831E+00		2.520E+01	1.496E+01	5.371E+02
14.04.40	8.731E+01	6.988E+00	8.362E+00		2.509E+01	1.496E+01	5.444E+02
14.04.50	8.807E+01	9.027E+00	8.983E+00		2.509E+01	1.496E+01	5.432E+02
14.05.00	8.784E+01	7.155E+00	8.611E+00		2.512E+01	1.496E+01	5.420E+02
14.05.10	8.708E+01	8.444E+00	8.280E+00		2.510E+01	1.492E+01	5.420E+02
14.05.20	9.051E+01	1.010E+01	7.907E+00		2.512E+01	1.488E+01	5.408E+02
14.05.30	8.718E+01	7.904E+00	7.659E+00		2.510E+01	1.500E+01	5.408E+02
14.05.40	8.490E+01	8.236E+00	8.694E+00		2.506E+01	1.504E+01	5.402E+02
14.05.50	8.104E+01	9.817E+00	7.410E+00		2.504E+01	1.512E+01	5.408E+02
14.06.00	7.982E+01	9.027E+00	7.162E+00		2.504E+01	1.508E+01	5.414E+02
14.06.10	8.075E+01	7.571E+00	8.569E+00		2.504E+01	1.508E+01	5.408E+02
14.06.20	7.992E+01	6.947E+00	6.251E+00		2.504E+01	1.512E+01	5.402E+02
14.06.30	8.042E+01	8.278E+00	5.299E+00		2.506E+01	1.508E+01	5.389E+02
14.06.40	7.995E+01	9.276E+00	7.990E+00		2.508E+01	1.500E+01	5.389E+02
14.06.50	7.976E+01	8.444E+00	9.439E+00		2.510E+01	1.480E+01	5.402E+02
14.07.00	8.061E+01	9.692E+00	9.811E+00		2.503E+01	1.496E+01	5.414E+02
14.07.10	7.933E+01	8.819E+00	8.031E+00		2.498E+01	1.500E+01	5.444E+02
14.07.20	8.114E+01	7.612E+00	8.528E+00		2.494E+01	1.500E+01	5.432E+02
14.07.30	8.322E+01	1.027E+01	7.245E+00		2.489E+01	1.504E+01	5.420E+02
14.07.40	8.009E+01	6.822E+00	7.245E+00		2.490E+01	1.496E+01	5.408E+02
14.07.50	7.570E+01	6.531E+00	7.410E+00		2.483E+01	1.508E+01	5.414E+02
14.08.00	7.629E+01	6.988E+00	6.955E+00		2.491E+01	1.496E+01	5.377E+02
14.08.10	7.764E+01	8.819E+00	7.452E+00		2.483E+01	1.516E+01	5.402E+02
14.08.20	7.649E+01	8.569E+00	8.155E+00		2.482E+01	1.512E+01	5.408E+02
14.08.30	8.058E+01	7.571E+00	8.155E+00		2.478E+01	1.512E+01	5.426E+02
14.08.40	7.943E+01	6.406E+00	7.866E+00		2.481E+01	1.508E+01	5.408E+02
14.08.50	7.910E+01	8.153E+00	7.700E+00		2.483E+01	1.504E+01	5.408E+02
14.09.00	7.801E+01	7.904E+00	9.356E+00		2.479E+01	1.496E+01	5.438E+02
14.09.10	7.837E+01	7.987E+00	9.232E+00		2.480E+01	1.492E+01	5.432E+02
14.09.20	7.863E+01	8.777E+00	9.066E+00		2.484E+01	1.484E+01	5.414E+02
14.09.30	7.992E+01	6.988E+00	8.280E+00		2.486E+01	1.484E+01	5.395E+02
14.09.40	7.811E+01	8.236E+00	7.369E+00		2.481E+01	1.496E+01	5.426E+02
14.09.50	7.705E+01	7.529E+00	8.114E+00		2.477E+01	1.500E+01	5.432E+02
14.10.00	7.484E+01	8.528E+00	5.175E+00		2.471E+01	1.520E+01	5.432E+02
14.10.10	6.870E+01	7.862E+00	5.547E+00		2.473E+01	1.508E+01	5.426E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B6.- Continued

(d) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
14.10.20	7.283E+01	6.073E+00	7.824E+00		2.476E+01	1.504E+01	5.414E+02
14.10.30	7.395E+01	6.448E+00	6.913E+00		2.468E+01	1.440E+01	5.475E+02
14.10.40	6.652E+01	5.865E+00	6.210E+00		2.472E+01	1.344E+01	5.475E+02
14.10.50	6.850E+01	5.782E+00	6.375E+00		2.464E+01	1.540E+01	5.420E+02
14.11.00	6.471E+01	6.822E+00	7.452E+00		2.463E+01	1.536E+01	5.420E+02
14.11.10	6.543E+01	9.817E+00	7.907E+00		2.450E+01	1.592E+01	5.432E+02
14.11.20	6.256E+01	1.010E+01	7.286E+00		2.442E+01	1.652E+01	5.426E+02
14.11.30	6.081E+01	1.119E+01	7.327E+00		2.431E+01	1.548E+01	5.505E+02
14.11.40	5.725E+01	8.070E+00	9.977E+00		2.431E+01	1.712E+01	5.420E+02
14.11.50	5.742E+01	8.195E+00	7.286E+00		2.419E+01	1.752E+01	5.432E+02
14.12.00	6.085E+01	8.278E+00	6.375E+00		2.412E+01	1.812E+01	5.420E+02
14.12.10	6.138E+01	8.652E+00	7.038E+00		2.416E+01	1.784E+01	5.438E+02
14.12.20	5.923E+01	7.737E+00	6.748E+00		2.419E+01	1.784E+01	5.414E+02
14.12.30	5.547E+01	9.235E+00	7.783E+00		2.416E+01	1.804E+01	5.408E+02
14.12.40	5.798E+01	8.320E+00	9.108E+00		2.410E+01	1.828E+01	5.414E+02
14.12.50	5.540E+01	8.652E+00	7.617E+00		2.407E+01	1.840E+01	5.414E+02
14.13.00	5.676E+01	9.360E+00	5.961E+00		2.405E+01	1.856E+01	5.420E+02
14.13.10	5.732E+01	8.860E+00	8.776E+00		2.404E+01	1.864E+01	5.414E+02
14.13.20	5.227E+01	1.052E+01	8.445E+00		2.402E+01	1.876E+01	5.402E+02
14.13.30	5.072E+01	7.862E+00	8.404E+00		2.398E+01	1.884E+01	5.414E+02
14.13.40	5.276E+01	6.822E+00	8.694E+00		2.396E+01	1.884E+01	5.426E+02
14.13.50	4.946E+01	7.820E+00	8.735E+00		2.398E+01	1.896E+01	5.414E+02
14.14.00	4.814E+01	6.739E+00	8.776E+00		2.402E+01	1.872E+01	5.402E+02
14.14.10	4.913E+01	6.614E+00	8.404E+00		2.399E+01	1.892E+01	5.414E+02
14.14.20	4.880E+01	4.908E+00	9.025E+00		2.404E+01	1.844E+01	5.414E+02
14.14.30	5.098E+01	5.116E+00	9.066E+00		2.403E+01	1.840E+01	5.420E+02
14.14.40	4.893E+01	7.654E+00	9.190E+00		2.401E+01	1.752E+01	5.444E+02
14.14.50	4.841E+01	6.656E+00	1.006E+01		2.413E+01	1.736E+01	5.420E+02
14.15.00	5.355E+01	8.569E+00	8.155E+00		2.421E+01	1.692E+01	5.420E+02
14.15.10	5.771E+01	8.944E+00	6.665E+00		2.435E+01	1.620E+01	5.414E+02
14.15.20	6.194E+01	1.077E+01	5.796E+00		2.433E+01	1.660E+01	5.408E+02
14.15.30	5.910E+01	1.089E+01	3.891E+00		2.428E+01	1.592E+01	5.432E+02
14.15.40	5.844E+01	1.060E+01	5.547E+00		2.433E+01	1.584E+01	5.438E+02
14.15.50	5.874E+01	9.027E+00	7.038E+00		2.454E+01	1.332E+01	5.463E+02
14.16.00	6.755E+01	8.444E+00	7.783E+00		2.461E+01	1.348E+01	5.432E+02
14.16.10	6.715E+01	6.905E+00	7.534E+00		2.463E+01	1.376E+01	5.414E+02
14.16.20	7.293E+01	1.094E+01	6.582E+00		2.463E+01	1.344E+01	5.432E+02
14.16.30	7.154E+01	1.064E+01	7.866E+00		2.464E+01	1.428E+01	5.414E+02
14.16.40	6.867E+01	8.944E+00	8.528E+00		2.466E+01	1.428E+01	5.414E+02
14.16.50	6.982E+01	8.860E+00	7.990E+00		2.467E+01	1.436E+01	5.414E+02
14.17.00	6.976E+01	6.822E+00	7.907E+00		2.465E+01	1.452E+01	5.420E+02
14.17.10	6.979E+01	7.030E+00	9.729E+00		2.468E+01	1.256E+01	5.463E+02
14.17.20	6.725E+01	8.569E+00	1.080E+01		2.468E+01	1.444E+01	5.420E+02
14.17.30	7.032E+01	7.987E+00	1.055E+01		2.475E+01	1.392E+01	5.420E+02
14.17.40	6.847E+01	7.571E+00	8.569E+00		2.480E+01	1.372E+01	5.402E+02
14.17.50	6.365E+01	7.529E+00	8.238E+00		2.472E+01	1.444E+01	5.402E+02
14.18.00	5.857E+01	1.135E+01	8.569E+00		2.469E+01	1.484E+01	5.402E+02
14.18.10	5.184E+01	9.526E+00	8.776E+00		2.469E+01	1.476E+01	5.402E+02
14.18.20	5.362E+01	6.240E+00	8.404E+00		2.467E+01	1.456E+01	5.420E+02
14.18.30	5.623E+01	7.113E+00	7.410E+00		2.469E+01	1.452E+01	5.414E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B6.- Continued

(d) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
14.18.40	5.530E+01	7.030E+00	7.659E+00		2.470E+01	1.460E+01	5.420E+02
14.18.50	5.296E+01	9.110E+00	6.624E+00		2.475E+01	1.428E+01	5.402E+02
14.19.00	5.742E+01	9.568E+00	7.783E+00		2.475E+01	1.416E+01	5.395E+02
14.19.10	5.910E+01	8.361E+00	9.190E+00		2.467E+01	1.456E+01	5.395E+02
14.19.20	5.428E+01	8.736E+00	8.942E+00		2.461E+01	1.488E+01	5.389E+02
14.19.30	5.062E+01	9.984E+00	6.624E+00		2.445E+01	1.568E+01	5.389E+02
14.19.40	4.478E+01	8.944E+00	7.286E+00		2.440E+01	1.600E+01	5.414E+02
14.19.50	4.240E+01	8.070E+00	6.582E+00		2.434E+01	1.652E+01	5.420E+02
14.20.00	3.857E+01	9.068E+00	6.582E+00		2.430E+01	1.656E+01	5.420E+02
14.20.10	3.474E+01	1.040E+01	7.493E+00		2.426E+01	1.664E+01	5.414E+02
14.20.20	3.639E+01	7.612E+00	6.955E+00		2.425E+01	1.640E+01	5.402E+02
14.20.30	4.059E+01	7.363E+00	4.471E+00		2.425E+01	1.684E+01	5.395E+02
14.20.40	3.639E+01	7.737E+00	5.423E+00		2.421E+01	1.752E+01	5.395E+02
14.20.50	3.197E+01	6.614E+00	5.878E+00		2.422E+01	1.764E+01	5.377E+02
14.21.00	3.210E+01	7.571E+00	6.624E+00		2.419E+01	1.772E+01	5.383E+02
14.21.10	3.243E+01	7.196E+00	7.410E+00		2.413E+01	1.548E+01	5.432E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B6.- Continued

(e) Spiral at B

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
14.47.00	4.649E+01	1.064E+01	9.894E+00		2.715E+01	2.152E+01	1.032E+02
14.47.10	4.623E+01	8.569E+00	9.273E+00		2.662E+01	2.120E+01	1.478E+02
14.47.20	4.715E+01	7.113E+00	1.092E+01		2.625E+01	2.172E+01	1.814E+02
14.47.30	4.507E+01	1.023E+01	9.273E+00		2.587E+01	2.196E+01	2.212E+02
14.47.40	4.290E+01	9.360E+00	8.694E+00		2.541E+01	2.172E+01	2.615E+02
14.47.50	4.425E+01	1.106E+01	9.232E+00		2.519E+01	2.128E+01	2.896E+02
14.48.00	4.349E+01	7.030E+00	9.273E+00		2.502E+01	2.036E+01	3.208E+02
14.48.10	4.950E+01	8.028E+00	9.066E+00		2.458E+01	2.084E+01	3.611E+02
14.48.20	4.478E+01	5.324E+00	8.404E+00		2.440E+01	1.972E+01	3.978E+02
14.48.30	5.402E+01	7.238E+00	9.604E+00		2.452E+01	1.744E+01	4.344E+02
14.48.40	7.375E+01	8.860E+00	8.942E+00		2.385E+01	2.028E+01	4.687E+02
14.48.50	5.458E+01	4.368E+00	9.480E+00		2.363E+01	1.896E+01	4.949E+02
14.49.00	6.550E+01	5.907E+00	7.120E+00		2.350E+01	1.876E+01	5.230E+02
14.49.10	5.966E+01	7.529E+00	6.748E+00		2.347E+01	1.844E+01	5.487E+02
14.49.20	6.276E+01	9.984E+00	7.120E+00		2.354E+01	1.684E+01	5.695E+02
14.49.30	7.233E+01	7.363E+00	6.706E+00		2.337E+01	1.712E+01	5.921E+02
14.49.40	6.887E+01	8.153E+00	4.843E+00		2.298E+01	1.640E+01	6.404E+02
14.49.50	7.203E+01	6.614E+00	5.257E+00		2.259E+01	1.584E+01	6.880E+02
14.50.00	6.527E+01	7.238E+00	5.464E+00		2.222E+01	1.684E+01	7.198E+02
14.50.10	5.573E+01	7.321E+00	6.789E+00		2.194E+01	1.616E+01	7.516E+02
14.50.20	6.438E+01	1.060E+01	7.617E+00		2.218E+01	1.296E+01	7.822E+02
14.50.30	7.619E+01	9.360E+00	6.624E+00		2.181E+01	1.328E+01	8.158E+02
14.50.40	8.560E+01	7.987E+00	4.057E+00		2.156E+01	1.276E+01	8.500E+02
14.50.50	8.164E+01	6.988E+00	6.748E+00		2.126E+01	1.240E+01	8.873E+02
14.51.00	8.646E+01	9.110E+00	7.948E+00		2.119E+01	1.144E+01	9.190E+02
14.51.10	9.035E+01	9.568E+00	9.190E+00		2.124E+01	8.240E+00	9.478E+02
14.51.20	7.537E+01	9.692E+00	9.522E+00		2.090E+01	1.004E+01	9.765E+02
14.51.30	7.566E+01	8.860E+00	1.063E+01		2.128E+01	6.720E+00	1.004E+03
14.51.40	7.141E+01	7.696E+00	1.010E+01		2.172E+01	1.480E+00	1.032E+03
14.51.50	6.685E+01	8.195E+00	8.859E+00		2.179E+01	7.600E-01	1.060E+03
14.52.00	6.487E+01	4.284E+00	6.831E+00		2.212E+01	2.000E+00	1.087E+03
14.52.10	6.501E+01	6.240E+00	6.003E+00		2.235E+01	6.040E+00	1.115E+03
14.52.20	6.253E+01	5.616E+00	7.824E+00		2.206E+01	7.840E+00	1.143E+03
14.52.30	6.481E+01	6.614E+00	6.541E+00		2.174E+01	5.760E+00	1.171E+03
14.52.40	6.375E+01	9.235E+00	6.375E+00		2.148E+01	2.640E+00	1.199E+03
14.52.50	6.421E+01	5.907E+00	8.859E+00		2.129E+01	3.320E+00	1.224E+03
14.53.00	6.279E+01	7.030E+00	6.458E+00		2.114E+01	2.760E+00	1.252E+03
14.53.10	6.840E+01	8.361E+00	6.789E+00		2.099E+01	3.600E+00	1.279E+03
14.53.20	6.936E+01	8.153E+00	7.534E+00		2.058E+01	2.120E+00	1.305E+03
14.53.30	7.038E+01	8.736E+00	5.671E+00		2.102E+01	4.840E+00	1.333E+03
14.53.40	6.811E+01	8.569E+00	8.280E+00		2.076E+01	7.520E+00	1.361E+03
14.53.50	6.864E+01	8.320E+00	8.528E+00		2.061E+01	7.880E+00	1.388E+03
14.54.00	6.712E+01	5.532E+00	9.356E+00		2.083E+01	9.640E+00	1.415E+03
14.54.10	5.916E+01	7.446E+00	9.563E+00		2.064E+01	1.000E+01	1.447E+03
14.54.20	5.808E+01	6.947E+00	8.569E+00		2.052E+01	1.124E+01	1.474E+03
14.54.30	5.728E+01	3.369E+00	7.700E+00		2.061E+01	1.128E+01	1.467E+03

*No data due to instrument malfunction.

APPENDIX B

TABLE B6.- Continued

(f) Leg B → A

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
14.58.10	7.359E+01	9.817E+00	1.134E+01		2.311E+01	1.936E+01	5.567E+02
14.58.20	5.781E+01	7.696E+00	1.039E+01		2.309E+01	1.848E+01	5.597E+02
14.58.30	6.405E+01	8.028E+00	9.439E+00		2.336E+01	1.732E+01	5.567E+02
14.58.40	6.824E+01	6.864E+00	9.273E+00		2.324E+01	1.912E+01	5.542E+02
14.58.50	6.204E+01	5.200E+00	1.188E+01		2.312E+01	1.972E+01	5.530E+02
14.59.00	5.494E+01	8.611E+00	1.308E+01		2.322E+01	1.908E+01	5.548E+02
14.59.10	6.002E+01	1.015E+01	1.333E+01		2.329E+01	1.868E+01	5.591E+02
14.59.20	6.042E+01	9.401E+00	1.395E+01		2.374E+01	1.688E+01	5.518E+02
14.59.30	6.751E+01	7.571E+00	1.349E+01		2.367E+01	1.748E+01	5.536E+02
14.59.40	6.669E+01	1.048E+01	1.320E+01		2.348E+01	1.848E+01	5.530E+02
14.59.50	5.933E+01	1.015E+01	1.092E+01		2.337E+01	1.900E+01	5.554E+02
15.00.00	5.722E+01	9.692E+00	1.006E+01		2.347E+01	1.876E+01	5.536E+02
15.00.10	5.867E+01	7.072E+00	1.010E+01		2.365E+01	1.840E+01	5.512E+02
15.00.20	5.844E+01	7.446E+00	1.051E+01		2.360E+01	1.904E+01	5.518E+02
15.00.30	5.775E+01	7.571E+00	1.051E+01		2.340E+01	1.984E+01	5.542E+02
15.00.40	5.408E+01	8.361E+00	8.031E+00		2.343E+01	1.992E+01	5.536E+02
15.00.50	5.448E+01	7.529E+00	8.735E+00		2.338E+01	2.020E+01	5.548E+02
15.01.00	5.177E+01	7.238E+00	1.018E+01		2.362E+01	1.952E+01	5.499E+02
15.01.10	6.273E+01	7.155E+00	1.006E+01		2.410E+01	1.636E+01	5.530E+02
15.01.20	7.091E+01	8.320E+00	1.213E+01		2.415E+01	1.636E+01	5.512E+02
15.01.30	7.454E+01	9.568E+00	1.391E+01		2.403E+01	1.748E+01	5.518E+02
15.01.40	7.101E+01	8.985E+00	1.200E+01		2.410E+01	1.704E+01	5.499E+02
15.01.50	7.807E+01	1.114E+01	1.026E+01		2.398E+01	1.764E+01	5.493E+02
15.02.00	7.685E+01	1.056E+01	1.179E+01		2.383E+01	1.820E+01	5.512E+02
15.02.10	6.639E+01	9.484E+00	1.295E+01		2.370E+01	1.908E+01	5.560E+02
15.02.20	6.289E+01	8.985E+00	1.295E+01		2.377E+01	1.904E+01	5.469E+02
15.02.30	6.477E+01	5.740E+00	1.204E+01		2.371E+01	1.844E+01	5.542E+02
15.02.40	6.464E+01	7.820E+00	1.150E+01		2.386E+01	1.816E+01	5.530E+02
15.02.50	7.038E+01	7.113E+00	1.270E+01		2.397E+01	1.760E+01	5.518E+02
15.03.00	6.837E+01	7.945E+00	1.246E+01		2.382E+01	1.804E+01	5.548E+02
15.03.10	6.448E+01	9.776E+00	1.167E+01		2.383E+01	1.856E+01	5.542E+02
15.03.20	6.217E+01	8.819E+00	1.200E+01		2.366E+01	1.988E+01	5.548E+02
15.03.30	5.497E+01	8.195E+00	1.088E+01		2.394E+01	1.828E+01	5.499E+02
15.03.40	6.745E+01	5.116E+00	1.130E+01		2.403E+01	1.712E+01	5.536E+02
15.03.50	7.236E+01	9.484E+00	1.072E+01		2.371E+01	1.908E+01	5.548E+02
15.04.00	6.200E+01	6.947E+00	1.233E+01		2.371E+01	1.996E+01	5.548E+02
15.04.10	5.313E+01	6.614E+00	1.254E+01		2.380E+01	1.904E+01	5.518E+02
15.04.20	5.791E+01	6.739E+00	1.084E+01		2.364E+01	1.996E+01	5.560E+02
15.04.30	4.986E+01	6.822E+00	7.741E+00		2.377E+01	1.980E+01	5.512E+02
15.04.40	5.075E+01	7.820E+00	6.996E+00		2.385E+01	1.896E+01	5.524E+02
15.04.50	5.448E+01	6.864E+00	7.452E+00		2.385E+01	1.920E+01	5.499E+02
15.05.00	5.289E+01	7.113E+00	8.487E+00		2.399E+01	1.788E+01	5.518E+02
15.05.10	6.352E+01	6.822E+00	1.010E+01		2.393E+01	1.836E+01	5.524E+02
15.05.20	6.009E+01	6.905E+00	9.811E+00		2.376E+01	1.924E+01	5.512E+02
15.05.30	4.864E+01	8.070E+00	8.528E+00		2.395E+01	1.768E+01	5.530E+02
15.05.40	6.075E+01	7.612E+00	9.439E+00		2.396E+01	1.820E+01	5.512E+02
15.05.50	6.121E+01	7.571E+00	9.522E+00		2.369E+01	1.972E+01	5.542E+02
15.06.00	5.025E+01	6.406E+00	8.114E+00		2.388E+01	1.824E+01	5.518E+02
15.06.10	5.956E+01	7.113E+00	7.741E+00		2.391E+01	1.864E+01	5.512E+02
15.06.20	5.451E+01	4.659E+00	6.955E+00		2.418E+01	1.748E+01	5.530E+02
15.06.30	6.471E+01	8.777E+00	7.286E+00		2.445E+01	1.548E+01	5.560E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B6.- Continued

(g) Leg K → L

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.25.20	7.850E+01	9.276E+00	1.076E+01	1.883E+00	2.669E+01	1.572E+01	5.499E+02
18.25.30	7.689E+01	9.193E+00	1.001E+01	1.753E+00	2.680E+01	1.360E+01	5.524E+02
18.25.40	7.494E+01	1.044E+01	1.059E+01	1.676E+00	2.660E+01	1.488E+01	5.512E+02
18.25.50	7.656E+01	8.777E+00	1.022E+01	1.765E+00	2.647E+01	1.580E+01	5.628E+02
18.26.00	7.788E+01	1.010E+01	9.232E+00	1.736E+00	2.692E+01	1.520E+01	5.420E+02
18.26.10	8.104E+01	9.401E+00	1.006E+01	1.786E+00	2.663E+01	1.616E+01	5.554E+02
18.26.20	7.857E+01	8.403E+00	1.001E+01	1.812E+00	2.662E+01	1.632E+01	5.493E+02
18.26.30	8.019E+01	8.320E+00	1.084E+01	1.802E+00	2.651E+01	1.648E+01	5.505E+02
18.26.40	8.217E+01	8.736E+00	1.026E+01	1.856E+00	2.648E+01	1.676E+01	5.524E+02
18.26.50	7.817E+01	8.902E+00	1.001E+01	1.856E+00	2.643E+01	1.668E+01	5.536E+02
18.27.00	7.887E+01	7.862E+00	1.010E+01	1.825E+00	2.659E+01	1.584E+01	5.524E+02
18.27.10	8.005E+01	9.152E+00	1.001E+01	1.794E+00	2.660E+01	1.564E+01	5.487E+02
18.27.20	7.834E+01	6.780E+00	1.010E+01	1.872E+00	2.658E+01	1.512E+01	5.499E+02
18.27.30	8.167E+01	7.155E+00	1.138E+01	1.787E+00	2.646E+01	1.504E+01	5.530E+02
18.27.40	8.246E+01	8.902E+00	9.108E+00	1.779E+00	2.650E+01	1.436E+01	5.554E+02
18.27.50	8.309E+01	1.002E+01	8.859E+00	1.794E+00	2.641E+01	1.516E+01	5.542E+02
18.28.00	8.250E+01	8.777E+00	9.563E+00	1.760E+00	2.636E+01	1.528E+01	5.536E+02
18.28.10	8.444E+01	8.278E+00	9.356E+00	1.779E+00	2.634E+01	1.572E+01	5.597E+02
18.28.20	8.335E+01	9.027E+00	9.149E+00	1.834E+00	2.633E+01	1.616E+01	5.536E+02
18.28.30	8.193E+01	1.077E+01	8.942E+00	1.850E+00	2.623E+01	1.684E+01	5.560E+02
18.28.40	8.477E+01	8.652E+00	8.776E+00	1.874E+00	2.621E+01	1.696E+01	5.542E+02
18.28.50	8.362E+01	8.736E+00	7.866E+00	1.773E+00	2.629E+01	1.712E+01	5.585E+02
18.29.00	8.345E+01	9.152E+00	8.031E+00	1.862E+00	2.650E+01	1.740E+01	5.591E+02
18.29.10	8.787E+01	9.068E+00	8.528E+00	1.929E+00	2.668E+01	1.700E+01	5.469E+02
18.29.20	8.906E+01	7.196E+00	9.977E+00	1.915E+00	2.673E+01	1.640E+01	5.505E+02
18.29.30	8.943E+01	8.777E+00	1.080E+01	1.678E+00	2.677E+01	1.644E+01	5.518E+02
18.29.40	9.098E+01	8.777E+00	1.175E+01	1.839E+00	2.673E+01	1.584E+01	5.530E+02
18.29.50	8.873E+01	7.446E+00	1.039E+01		2.678E+01	1.616E+01	5.457E+02
18.30.00	9.038E+01	8.112E+00	1.030E+01		2.671E+01	1.584E+01	5.567E+02
18.30.10	8.834E+01	7.612E+00	9.687E+00	1.779E+00	2.679E+01	1.576E+01	5.542E+02
18.30.20	9.302E+01	6.947E+00	9.315E+00	1.802E+00	2.682E+01	1.540E+01	5.450E+02
18.30.30	8.999E+01	7.945E+00	9.108E+00	1.804E+00	2.672E+01	1.504E+01	5.567E+02
18.30.40	8.748E+01	9.484E+00	9.646E+00	1.827E+00	2.666E+01	1.564E+01	5.524E+02
18.30.50	8.985E+01	9.276E+00	8.983E+00	1.804E+00	2.668E+01	1.532E+01	5.542E+02
18.31.00	9.028E+01	7.987E+00	9.108E+00	1.801E+00	2.666E+01	1.588E+01	5.518E+02
18.31.10	8.669E+01	8.361E+00	9.936E+00	1.772E+00	2.659E+01	1.596E+01	5.542E+02
18.31.20	8.622E+01	8.361E+00	1.043E+01	1.846E+00	2.653E+01	1.644E+01	5.573E+02
18.31.30	8.263E+01	8.070E+00	9.604E+00	1.787E+00	2.655E+01	1.676E+01	5.573E+02
18.31.40	8.349E+01	8.528E+00	9.853E+00	1.829E+00	2.673E+01	1.672E+01	5.518E+02
18.31.50	8.405E+01	8.652E+00	9.232E+00	1.882E+00	2.666E+01	1.688E+01	5.505E+02
18.32.00	8.131E+01	7.529E+00	8.776E+00	1.883E+00	2.647E+01	1.712E+01	5.548E+02
18.32.10	8.157E+01	6.656E+00	9.273E+00	1.890E+00	2.638E+01	1.696E+01	5.567E+02
18.32.20	8.217E+01	7.820E+00	9.646E+00	1.904E+00	2.629E+01	1.692E+01	5.597E+02
18.32.30	8.137E+01	6.947E+00	9.066E+00	1.873E+00	2.651E+01	1.756E+01	5.560E+02
18.32.40	7.873E+01	7.155E+00	9.356E+00	1.886E+00	2.666E+01	1.752E+01	5.560E+02
18.32.50	7.962E+01	7.072E+00	9.646E+00	1.874E+00	2.673E+01	1.724E+01	5.518E+02
18.33.00	7.962E+01	6.905E+00	9.273E+00	1.862E+00	2.675E+01	1.732E+01	5.554E+02
18.33.10	8.075E+01	9.068E+00	8.528E+00	1.863E+00	2.690E+01	1.720E+01	5.383E+02
18.33.20	7.979E+01	8.569E+00	8.859E+00	1.929E+00	2.748E+01	1.760E+01	4.815E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B6.- Continued

(h) Spiral at L

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.35.20	7.857E+01	6.822E+00	1.006E+01		3.090E+01	1.848E+01	1.289E+02
18.35.30	8.355E+01	7.820E+00	9.356E+00		3.048E+01	1.804E+01	1.552E+02
18.35.40	8.358E+01	7.987E+00	8.694E+00		3.002E+01	1.764E+01	1.802E+02
18.35.50	8.372E+01	7.654E+00	8.942E+00		2.986E+01	1.760E+01	1.992E+02
18.36.00	8.094E+01	5.657E+00	9.646E+00		2.973E+01	1.720E+01	2.157E+02
18.36.10	8.276E+01	7.238E+00	8.901E+00		2.937E+01	1.804E+01	2.597E+02
18.36.20	8.342E+01	8.070E+00	9.563E+00		2.897E+01	1.756E+01	2.878E+02
18.36.30	8.210E+01	7.654E+00	9.894E+00		2.869E+01	1.740E+01	3.079E+02
18.36.40	8.193E+01	8.819E+00	1.026E+01		2.857E+01	1.744E+01	3.275E+02
18.36.50	8.471E+01	9.193E+00	1.001E+01		2.837E+01	1.768E+01	3.642E+02
18.37.00	8.500E+01	8.112E+00	9.439E+00		2.789E+01	1.752E+01	3.941E+02
18.37.10	8.573E+01	6.947E+00	9.315E+00		2.776E+01	1.700E+01	4.155E+02
18.37.20	8.411E+01	7.820E+00	9.646E+00		2.748E+01	1.716E+01	4.430E+02
18.37.30	8.672E+01	8.320E+00	1.010E+01		2.713E+01	1.692E+01	4.760E+02
18.37.40	8.728E+01	7.737E+00	1.121E+01		2.691E+01	1.700E+01	5.072E+02
18.37.50	8.302E+01	6.156E+00	1.150E+01		2.647E+01	1.704E+01	5.438E+02
18.38.00	8.207E+01	7.488E+00	1.142E+01		2.631E+01	1.716E+01	5.622E+02
18.38.10	8.217E+01	6.656E+00	1.047E+01		2.609E+01	1.740E+01	5.921E+02
18.38.20	7.863E+01	7.779E+00	1.014E+01		2.570E+01	1.756E+01	6.373E+02
18.38.30	7.788E+01	7.196E+00	9.646E+00		2.517E+01	1.732E+01	6.813E+02
18.38.40	7.976E+01	7.196E+00	8.818E+00		2.483E+01	1.708E+01	7.107E+02
18.38.50	7.725E+01	6.780E+00	1.084E+01		2.482E+01	1.544E+01	7.314E+02
18.39.00	7.639E+01	7.779E+00	1.043E+01		2.443E+01	1.660E+01	7.583E+02
18.39.10	7.811E+01	7.404E+00	9.356E+00		2.399E+01	1.640E+01	8.017E+02
18.39.20	7.510E+01	7.404E+00	1.047E+01		2.361E+01	1.636E+01	8.414E+02
18.39.30	7.593E+01	7.904E+00	1.076E+01		2.348E+01	1.580E+01	8.683E+02
18.39.40	7.685E+01	6.531E+00	1.146E+01		2.321E+01	1.640E+01	8.934E+02
18.39.50	7.329E+01	7.654E+00	1.121E+01		2.270E+01	1.632E+01	9.380E+02
18.40.00	7.623E+01	1.168E+01	1.138E+01		2.259E+01	1.764E+01	9.288E+02
18.40.10	7.438E+01	1.106E+01	1.593E+01		2.115E+01	1.688E+01	9.875E+02
18.40.20	7.434E+01	7.737E+00	1.109E+01		2.186E+01	1.612E+01	1.024E+03
18.40.30	7.279E+01	6.281E+00	9.687E+00		2.164E+01	1.596E+01	1.050E+03
18.40.40	7.438E+01	6.864E+00	1.047E+01		2.141E+01	1.604E+01	1.073E+03
18.40.50	7.537E+01	7.696E+00	1.063E+01		2.135E+01	1.468E+01	1.101E+03
18.41.00	7.167E+01	6.656E+00	1.039E+01		2.086E+01	1.584E+01	1.132E+03
18.41.10	7.474E+01	7.529E+00	9.811E+00		2.056E+01	1.544E+01	1.159E+03
18.41.20	7.583E+01	6.572E+00	1.030E+01		2.042E+01	1.536E+01	1.176E+03
18.41.30	7.685E+01	8.403E+00	1.101E+01		2.012E+01	1.592E+01	1.200E+03
18.41.40	7.431E+01	7.654E+00	1.068E+01		1.986E+01	1.580E+01	1.228E+03
18.41.50	7.547E+01	7.280E+00	1.084E+01		1.957E+01	1.540E+01	1.261E+03
18.42.00	7.557E+01	7.945E+00	1.006E+01		1.946E+01	1.488E+01	1.284E+03
18.42.10	7.289E+01	8.070E+00	1.055E+01		1.965E+01	1.200E+01	1.304E+03
18.42.20	6.910E+01	7.446E+00	1.184E+01		1.953E+01	1.212E+01	1.328E+03
18.42.30	6.718E+01	9.193E+00	1.217E+01		1.907E+01	1.432E+01	1.357E+03
18.42.40	6.821E+01	7.529E+00	1.233E+01		1.866E+01	1.420E+01	1.388E+03
18.42.50	6.652E+01	8.153E+00	1.138E+01		1.875E+01	1.204E+01	1.416E+03
18.43.00	6.619E+01	8.985E+00	1.097E+01		1.827E+01	1.432E+01	1.442E+03
18.43.10	6.666E+01	7.945E+00	1.055E+01		1.805E+01	1.376E+01	1.459E+03
18.43.20	6.491E+01	7.529E+00	9.563E+00		1.893E+01	9.120E+00	1.474E+03
18.43.30	6.227E+01	8.361E+00	1.059E+01		1.944E+01	4.960E+00	1.489E+03
18.43.40	6.009E+01	8.611E+00	1.039E+01		1.918E+01	9.800E+00	1.462E+03

*No data due to instrument malfunction.

APPENDIX B

TABLE B6.- Continued

(i) Leg H → G

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.54.40	1.363E+02	7.612E+00	1.767E+01		2.604E+01	1.892E+01	5.542E+02
18.54.50	1.371E+02	7.945E+00	1.742E+01		2.593E+01	1.916E+01	5.609E+02
18.55.00	1.422E+02	7.987E+00	1.767E+01		2.591E+01	1.912E+01	5.615E+02
18.55.10	1.441E+02	7.737E+00	1.904E+01		2.574E+01	1.952E+01	5.628E+02
18.55.20	1.481E+02	8.694E+00	1.966E+01		2.543E+01	2.036E+01	5.615E+02
18.55.30	1.481E+02	8.569E+00	1.949E+01		2.536E+01	2.020E+01	5.658E+02
18.55.40	1.458E+02	7.488E+00	1.941E+01		2.573E+01	1.908E+01	5.670E+02
18.55.50	1.396E+02	8.403E+00	2.003E+01		2.591E+01	1.872E+01	5.634E+02
18.56.00	1.422E+02	8.860E+00	1.883E+01		2.569E+01	2.012E+01	5.591E+02
18.56.10	1.372E+02	8.694E+00	1.730E+01		2.606E+01	1.816E+01	5.597E+02
18.56.20	1.240E+02	8.902E+00	1.689E+01		2.634E+01	1.708E+01	5.670E+02
18.56.30	1.299E+02	8.278E+00	1.701E+01		2.660E+01	1.656E+01	5.622E+02
18.56.40	1.342E+02	1.002E+01	1.949E+01		2.690E+01	1.564E+01	5.603E+02
18.56.50	1.353E+02	8.819E+00	1.954E+01		2.664E+01	1.640E+01	5.640E+02
18.57.00	1.355E+02	1.060E+01	1.904E+01		2.679E+01	1.540E+01	5.670E+02
18.57.10	1.370E+02	1.002E+01	1.896E+01		2.692E+01	1.532E+01	5.640E+02
18.57.20	1.370E+02	9.942E+00	1.999E+01		2.682E+01	1.572E+01	5.646E+02
18.57.30	1.381E+02	8.569E+00	1.854E+01		2.686E+01	1.632E+01	5.628E+02
18.57.40	1.419E+02	9.526E+00	1.871E+01		2.694E+01	1.652E+01	5.597E+02
18.57.50	1.446E+02	9.859E+00	1.867E+01		2.674E+01	1.660E+01	5.634E+02
18.58.00	1.450E+02	9.609E+00	1.763E+01		2.672E+01	1.600E+01	5.683E+02
18.58.10	1.479E+02	8.070E+00	1.871E+01		2.684E+01	1.588E+01	5.597E+02
18.58.20	1.419E+02	7.321E+00	1.863E+01		2.665E+01	1.604E+01	5.677E+02
18.58.30	1.397E+02	9.193E+00	1.660E+01		2.691E+01	1.580E+01	5.615E+02
18.58.40	1.446E+02	8.112E+00	1.784E+01		2.690E+01	1.564E+01	5.664E+02
18.58.50	1.399E+02	7.987E+00	1.842E+01		2.692E+01	1.592E+01	5.609E+02
18.59.00	1.407E+02	7.904E+00	1.742E+01		2.683E+01	1.608E+01	5.640E+02
18.59.10	1.417E+02	8.652E+00	1.829E+01		2.688E+01	1.508E+01	5.640E+02
18.59.20	1.311E+02	9.235E+00	1.697E+01		2.690E+01	1.512E+01	5.634E+02
18.59.30	1.350E+02	7.612E+00	1.759E+01		2.663E+01	1.600E+01	5.658E+02
18.59.40	1.392E+02	9.360E+00	1.730E+01		2.642E+01	1.628E+01	5.670E+02
18.59.50	1.417E+02	8.320E+00	1.829E+01		2.639E+01	1.636E+01	5.652E+02
19.00.00	1.416E+02	1.060E+01	1.987E+01		2.641E+01	1.624E+01	5.683E+02
19.00.10	1.411E+02	7.571E+00	2.103E+01		2.641E+01	1.580E+01	5.701E+02
19.00.20	1.373E+02	6.406E+00	2.016E+01		2.646E+01	1.560E+01	5.695E+02
19.00.30	1.335E+02	8.112E+00	1.813E+01		2.647E+01	1.584E+01	5.683E+02
19.00.40	1.338E+02	9.692E+00	1.742E+01		2.653E+01	1.564E+01	5.658E+02
19.00.50	1.314E+02	9.110E+00	1.639E+01		2.667E+01	1.368E+01	5.683E+02
19.01.00	1.146E+02	8.486E+00	1.486E+01		2.670E+01	1.396E+01	5.689E+02
19.01.10	1.151E+02	9.276E+00	1.345E+01		2.663E+01	1.456E+01	5.658E+02
19.01.20	1.275E+02	9.734E+00	1.208E+01		2.659E+01	1.460E+01	5.664E+02
19.01.30	1.299E+02	8.569E+00	1.312E+01		2.656E+01	1.456E+01	5.664E+02
19.01.40	1.301E+02	9.401E+00	1.320E+01		2.636E+01	1.508E+01	5.689E+02
19.01.50	1.315E+02	8.944E+00	1.444E+01		2.631E+01	1.596E+01	5.707E+02
19.02.00	1.381E+02	8.694E+00	1.420E+01		2.624E+01	1.596E+01	5.695E+02
19.02.10	1.415E+02	8.860E+00	1.432E+01		2.627E+01	1.644E+01	5.664E+02
19.02.20	1.443E+02	8.112E+00	1.527E+01		2.615E+01	1.648E+01	5.707E+02
19.02.30	1.455E+02	6.073E+00	1.473E+01		2.612E+01	1.644E+01	5.713E+02
19.02.40	1.449E+02	9.068E+00	1.349E+01		2.616E+01	1.620E+01	5.695E+02
19.02.50	1.430E+02	8.569E+00	1.548E+01		2.614E+01	1.656E+01	5.689E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B6.- Continued

(i) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
19.03.00	1.450E+02	7.529E+00	1.829E+01		2.614E+01	1.596E+01	5.738E+02
19.03.10	1.416E+02	6.905E+00	1.647E+01		2.618E+01	1.680E+01	5.719E+02
19.03.20	1.430E+02	7.280E+00	1.867E+01		2.640E+01	1.524E+01	5.677E+02
19.03.30	1.402E+02	1.006E+01	1.854E+01		2.634E+01	1.668E+01	5.732E+02
19.03.40	1.398E+02	1.089E+01	1.896E+01		2.653E+01	1.564E+01	5.707E+02
19.03.50	1.368E+02	8.944E+00	1.867E+01		2.668E+01	1.540E+01	5.628E+02
19.04.00	1.336E+02	9.817E+00	1.742E+01		2.657E+01	1.504E+01	5.683E+02
19.04.10	1.286E+02	8.236E+00	1.589E+01		2.638E+01	1.572E+01	5.707E+02
19.04.20	1.286E+02	6.697E+00	1.552E+01		2.632E+01	1.640E+01	5.768E+02
19.04.30	1.328E+02	6.531E+00	1.465E+01		2.659E+01	1.580E+01	5.646E+02
19.04.40	1.283E+02	7.987E+00	1.436E+01		2.651E+01	1.664E+01	5.750E+02
19.04.50	1.310E+02	9.651E+00	1.362E+01		2.663E+01	1.588E+01	5.579E+02
19.05.00	1.297E+02	7.155E+00	1.382E+01		2.653E+01	1.540E+01	5.652E+02
19.05.10	1.273E+02	7.529E+00	1.196E+01		2.628E+01	1.604E+01	5.744E+02
19.05.20	1.280E+02	8.361E+00	1.270E+01		2.630E+01	1.564E+01	5.793E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B6.- Continued

(j) Spiral at E

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
19.16.30	1.150E+02	8.694E+00	1.407E+01		3.136E+01	1.912E+01	1.167E+02
19.16.40	1.130E+02	8.153E+00	1.461E+01		3.085E+01	1.920E+01	1.552E+02
19.16.50	1.144E+02	7.280E+00	1.366E+01		3.019E+01	1.896E+01	2.010E+02
19.17.00	1.161E+02	9.193E+00	1.320E+01		3.013E+01	1.836E+01	2.169E+02
19.17.10	1.120E+02	8.528E+00	1.138E+01		2.994E+01	1.836E+01	2.377E+02
19.17.20	1.135E+02	7.862E+00	1.208E+01		2.972E+01	1.824E+01	2.627E+02
19.17.30	1.121E+02	7.820E+00	1.283E+01		2.922E+01	1.824E+01	3.037E+02
19.17.40	1.084E+02	7.987E+00	1.333E+01		2.874E+01	1.816E+01	3.464E+02
19.17.50	1.114E+02	6.364E+00	1.097E+01		2.829E+01	1.800E+01	3.868E+02
19.18.00	1.099E+02	6.656E+00	1.126E+01		2.802E+01	1.744E+01	4.228E+02
19.18.10	1.119E+02	1.010E+01	1.295E+01		2.770E+01	1.700E+01	4.589E+02
19.18.20	1.101E+02	8.153E+00	1.391E+01		2.735E+01	1.656E+01	5.004E+02
19.18.30	1.074E+02	4.617E+00	1.411E+01		2.690E+01	1.672E+01	5.395E+02
19.18.40	1.087E+02	5.948E+00	1.411E+01		2.651E+01	1.644E+01	5.762E+02
19.18.50	1.062E+02	5.990E+00	1.386E+01		2.615E+01	1.696E+01	6.062E+02
19.19.00	1.089E+02	7.529E+00	1.254E+01		2.578E+01	1.748E+01	6.330E+02
19.19.10	1.082E+02	1.040E+01	1.324E+01		2.554E+01	1.768E+01	6.569E+02
19.19.20	1.058E+02	7.488E+00	1.171E+01		2.546E+01	1.720E+01	6.770E+02
19.19.30	1.067E+02	6.073E+00	1.167E+01		2.538E+01	1.712E+01	6.978E+02
19.19.40	1.052E+02	7.612E+00	1.225E+01		2.495E+01	1.752E+01	7.308E+02
19.19.50	1.038E+02	8.569E+00	1.155E+01		2.467E+01	1.724E+01	7.657E+02
19.20.00	1.036E+02	8.320E+00	1.001E+01		2.434E+01	1.716E+01	7.925E+02
19.20.10	1.019E+02	8.486E+00	1.035E+01		2.409E+01	1.712E+01	8.200E+02
19.20.20	1.031E+02	8.611E+00	1.014E+01		2.370E+01	1.704E+01	8.555E+02
19.20.30	1.014E+02	1.106E+01	1.080E+01		2.338E+01	1.692E+01	8.848E+02
19.20.40	9.857E+01	9.568E+00	1.039E+01		2.322E+01	1.668E+01	9.135E+02
19.20.50	1.000E+02	7.529E+00	1.101E+01		2.299E+01	1.648E+01	9.471E+02
19.21.00	9.873E+01	9.276E+00	1.126E+01		2.269E+01	1.648E+01	9.746E+02
19.21.10	9.860E+01	9.235E+00	1.167E+01		2.238E+01	1.652E+01	9.985E+02
19.21.20	9.801E+01	8.736E+00	1.233E+01		2.209E+01	1.652E+01	1.026E+03
19.21.30	9.942E+01	9.276E+00	1.196E+01		2.180E+01	1.644E+01	1.059E+03
19.21.40	9.814E+01	7.280E+00	1.146E+01		2.151E+01	1.632E+01	1.093E+03
19.21.50	9.771E+01	6.406E+00	9.770E+00		2.126E+01	1.624E+01	1.123E+03
19.22.00	9.444E+01	5.907E+00	9.025E+00		2.117E+01	1.532E+01	1.149E+03
19.22.10	9.388E+01	6.156E+00	1.001E+01		2.086E+01	1.600E+01	1.171E+03
19.22.20	9.500E+01	5.324E+00	1.076E+01		2.084E+01	1.512E+01	1.193E+03
19.22.30	9.365E+01	5.616E+00	1.217E+01		2.082E+01	1.456E+01	1.213E+03
19.22.40	9.457E+01	1.077E+01	1.138E+01		2.037E+01	1.608E+01	1.236E+03
19.22.50	9.629E+01	1.027E+01	1.403E+01		2.008E+01	1.600E+01	1.262E+03
19.23.00	9.556E+01	1.006E+01	1.436E+01		1.995E+01	1.524E+01	1.290E+03
19.23.10	9.104E+01	1.119E+01	1.283E+01		2.042E+01	1.292E+01	1.311E+03
19.23.20	8.906E+01	9.942E+00	1.262E+01		2.053E+01	1.172E+01	1.326E+03
19.23.30	8.718E+01	8.278E+00	1.246E+01		2.086E+01	1.048E+01	1.348E+03
19.23.40	8.362E+01	8.112E+00	1.117E+01		2.135E+01	5.720E+00	1.376E+03
19.23.50	7.514E+01	7.862E+00	9.522E+00		2.090E+01	6.360E+00	1.417E+03
19.24.00	7.646E+01	7.904E+00	8.238E+00		2.052E+01	5.600E+00	1.458E+03
19.24.10	7.725E+01	5.491E+00	9.439E+00		2.036E+01	4.480E+00	1.491E+03
19.24.20	7.236E+01	3.244E+00	1.279E+01		2.060E+01	5.080E+00	1.474E+03

*No data due to instrument malfunction.

APPENDIX B

TABLE B6.- Continued

(k) Leg E → F

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
19.28.50	1.072E+02	1.015E+01	1.213E+01		2.709E+01	1.744E+01	5.597E+02
19.29.00	1.074E+02	9.609E+00	1.353E+01		2.689E+01	1.716E+01	5.738E+02
19.29.10	1.070E+02	8.528E+00	1.287E+01		2.706E+01	1.744E+01	5.579E+02
19.29.20	1.119E+02	8.028E+00	1.246E+01		2.697E+01	1.740E+01	5.591E+02
19.29.30	1.071E+02	7.155E+00	1.192E+01		2.692E+01	1.720E+01	5.609E+02
19.29.40	1.095E+02	9.859E+00	1.250E+01	1.787E+00	2.683E+01	1.716E+01	5.634E+02
19.29.50	1.075E+02	9.526E+00	1.113E+01	1.840E+00	2.663E+01	1.760E+01	5.677E+02
19.30.00	1.116E+02	6.905E+00	1.134E+01	1.831E+00	2.678E+01	1.756E+01	5.603E+02
19.30.10	1.100E+02	1.131E+01	1.142E+01	1.719E+00	2.666E+01	1.748E+01	5.646E+02
19.30.20	1.094E+02	1.015E+01	1.200E+01	1.790E+00	2.668E+01	1.748E+01	5.634E+02
19.30.30	1.081E+02	6.739E+00	1.039E+01	1.731E+00	2.662E+01	1.752E+01	5.634E+02
19.30.40	1.111E+02	7.488E+00	1.063E+01		2.656E+01	1.736E+01	5.664E+02
19.30.50	1.082E+02	7.446E+00	9.604E+00		2.659E+01	1.728E+01	5.646E+02
19.31.00	1.075E+02	9.360E+00	1.213E+01		2.656E+01	1.724E+01	5.646E+02
19.31.10	1.109E+02	8.652E+00	1.374E+01		2.653E+01	1.720E+01	5.652E+02
19.31.20	1.066E+02	9.526E+00	1.146E+01	1.842E+00	2.646E+01	1.728E+01	5.664E+02
19.31.30	1.087E+02	6.697E+00	1.030E+01	1.762E+00	2.642E+01	1.724E+01	5.658E+02
19.31.40	1.106E+02	6.198E+00	9.977E+00	1.770E+00	2.639E+01	1.716E+01	5.670E+02
19.31.50	1.101E+02	7.654E+00	9.853E+00	1.725E+00	2.637E+01	1.724E+01	5.658E+02
19.32.00	1.129E+02	8.070E+00	9.190E+00	1.797E+00	2.638E+01	1.728E+01	5.664E+02
19.32.10	1.126E+02	5.283E+00	1.068E+01	1.819E+00	2.638E+01	1.700E+01	5.664E+02
19.32.20	1.099E+02	6.988E+00	9.770E+00	1.792E+00	2.641E+01	1.684E+01	5.652E+02
19.32.30	1.136E+02	6.697E+00	1.018E+01	1.729E+00	2.646E+01	1.676E+01	5.640E+02
19.32.40	1.134E+02	6.656E+00	9.066E+00	1.765E+00	2.647E+01	1.664E+01	5.634E+02
19.32.50	1.097E+02	1.094E+01	1.063E+01	1.728E+00	2.646E+01	1.672E+01	5.634E+02
19.33.00	1.098E+02	9.360E+00	1.130E+01	1.788E+00	2.638E+01	1.672E+01	5.658E+02
19.33.10	1.097E+02	8.028E+00	1.188E+01	1.779E+00	2.637E+01	1.676E+01	5.652E+02
19.33.20	1.088E+02	8.320E+00	1.316E+01	1.724E+00	2.643E+01	1.652E+01	5.634E+02
19.33.30	1.075E+02	9.027E+00	1.378E+01	1.783E+00	2.642E+01	1.644E+01	5.640E+02
19.33.40	1.070E+02	9.443E+00	1.308E+01	1.702E+00	2.653E+01	1.604E+01	5.615E+02
19.33.50	1.074E+02	7.571E+00	1.337E+01	1.694E+00	2.656E+01	1.528E+01	5.634E+02
19.34.00	1.047E+02	5.782E+00	1.283E+01	1.656E+00	2.660E+01	1.516E+01	5.622E+02
19.34.10	1.032E+02	6.156E+00	1.035E+01	1.701E+00	2.661E+01	1.496E+01	5.615E+02
19.34.20	1.001E+02	8.070E+00	9.604E+00	1.645E+00	2.651E+01	1.544E+01	5.634E+02
19.34.30	9.883E+01	8.153E+00	8.611E+00	1.721E+00	2.640E+01	1.580E+01	5.634E+02
19.34.40	9.989E+01	9.110E+00	7.907E+00	1.787E+00	2.638E+01	1.592E+01	5.634E+02
19.34.50	1.069E+02	8.403E+00	9.729E+00	1.821E+00	2.641E+01	1.580E+01	5.640E+02
19.35.00	1.087E+02	9.526E+00	1.233E+01	1.721E+00	2.651E+01	1.512E+01	5.628E+02
19.35.10	1.153E+02	9.235E+00	1.428E+01	1.781E+00	2.650E+01	1.480E+01	5.622E+02
19.35.20	1.158E+02	7.404E+00	1.457E+01	1.740E+00	2.643E+01	1.508E+01	5.622E+02
19.35.30	1.152E+02	7.446E+00	1.535E+01	1.718E+00	2.639E+01	1.536E+01	5.634E+02
19.35.40	1.167E+02	9.110E+00	1.767E+01	1.650E+00	2.642E+01	1.504E+01	5.640E+02
19.35.50	1.156E+02	1.139E+01	1.863E+01	1.687E+00	2.641E+01	1.508E+01	5.640E+02
19.36.00	1.188E+02	1.102E+01	2.003E+01	1.760E+00	2.627E+01	1.608E+01	5.664E+02
19.36.10	1.190E+02	8.652E+00	2.094E+01	1.815E+00	2.613E+01	1.672E+01	5.683E+02
19.36.20	1.245E+02	7.612E+00	1.941E+01	1.845E+00	2.608E+01	1.736E+01	5.634E+02
19.36.30	1.052E+02	9.484E+00	1.564E+01		2.610E+01	1.708E+01	5.670E+02
19.36.40	1.010E+02	1.019E+01	1.498E+01		2.606E+01	1.736E+01	5.640E+02
19.36.50	1.045E+02	8.777E+00	1.279E+01		2.610E+01	1.716E+01	5.628E+02
19.37.00	1.040E+02	8.736E+00	1.051E+01	1.731E+00	2.611E+01	1.712E+01	5.615E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B
TABLE B6.- Continued

(k) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
19.37.10	1.020E+02	9.900E+00	1.142E+01	1.831E+00	2.611E+01	1.696E+01	5.634E+02
19.37.20	1.011E+02	6.988E+00	1.246E+01	1.825E+00	2.608E+01	1.696E+01	5.628E+02
19.37.30	1.041E+02	6.656E+00	9.522E+00	1.773E+00	2.603E+01	1.704E+01	5.634E+02
19.37.40	1.070E+02	7.987E+00	8.942E+00	1.760E+00	2.601E+01	1.692E+01	5.658E+02
19.37.50	1.061E+02	4.576E+00	1.030E+01	1.790E+00	2.596E+01	1.712E+01	5.628E+02
19.38.00	1.078E+02	7.779E+00	1.026E+01	1.799E+00	2.590E+01	1.696E+01	5.646E+02
19.38.10	1.069E+02	8.195E+00	1.026E+01	1.805E+00	2.595E+01	1.696E+01	5.646E+02
19.38.20	1.084E+02	1.015E+01	9.894E+00	1.791E+00	2.583E+01	1.720E+01	5.677E+02
19.38.30	1.103E+02	9.401E+00	1.035E+01	1.833E+00	2.578E+01	1.736E+01	5.652E+02
19.38.40	1.136E+02	9.360E+00	1.126E+01	1.790E+00	2.580E+01	1.712E+01	5.640E+02
19.38.50	1.085E+02	7.987E+00	1.213E+01	1.753E+00	2.581E+01	1.688E+01	5.670E+02
19.39.00	1.057E+02	8.777E+00	1.076E+01	1.718E+00	2.576E+01	1.684E+01	5.725E+02
19.39.10	1.077E+02	8.320E+00	1.324E+01	1.735E+00	2.595E+01	1.660E+01	5.664E+02
19.39.20	1.071E+02	8.195E+00	1.237E+01	1.781E+00	2.590E+01	1.680E+01	5.670E+02
19.39.30	1.059E+02	7.654E+00	1.080E+01	1.829E+00	2.594E+01	1.652E+01	5.670E+02
19.39.40	1.064E+02	9.526E+00	1.142E+01	1.846E+00	2.597E+01	1.628E+01	5.689E+02
19.39.50	1.077E+02	8.902E+00	1.055E+01	1.771E+00	2.600E+01	1.632E+01	5.677E+02
19.40.00	1.045E+02	9.193E+00	9.315E+00	1.778E+00	2.595E+01	1.712E+01	5.695E+02
19.40.10	1.102E+02	1.006E+01	1.043E+01	1.869E+00	2.609E+01	1.716E+01	5.652E+02
19.40.20	1.123E+02	8.860E+00	1.175E+01	1.847E+00	2.608E+01	1.704E+01	5.609E+02
19.40.30	1.158E+02	6.156E+00	1.287E+01	1.894E+00	2.601E+01	1.672E+01	5.658E+02
19.40.40	1.068E+02	6.156E+00	1.068E+01	1.860E+00	2.595E+01	1.692E+01	5.707E+02
19.40.50	1.128E+02	6.614E+00	1.266E+01	1.864E+00	2.605E+01	1.676E+01	5.628E+02
19.41.00	1.122E+02	6.572E+00	1.192E+01	1.835E+00	2.591E+01	1.724E+01	5.646E+02
19.41.10	1.151E+02	1.094E+01	1.080E+01	1.829E+00	2.594E+01	1.720E+01	5.634E+02
19.41.20	1.152E+02	1.347E+01	9.397E+00	1.769E+00	2.592E+01	1.712E+01	5.646E+02
19.41.30	1.163E+02	1.385E+01	1.039E+01	1.737E+00	2.593E+01	1.692E+01	5.622E+02
19.41.40	1.153E+02	1.064E+01	1.088E+01	1.795E+00	2.596E+01	1.664E+01	5.628E+02
19.41.50	1.136E+02	8.195E+00	1.051E+01	1.866E+00	2.590E+01	1.644E+01	5.652E+02
19.42.00	1.157E+02	9.027E+00	1.030E+01	1.829E+00	2.585E+01	1.620E+01	5.689E+02
19.42.10	1.130E+02	7.737E+00	9.811E+00	1.786E+00	2.583E+01	1.628E+01	5.677E+02
19.42.20	1.127E+02	9.401E+00	1.117E+01	1.695E+00	2.578E+01	1.632E+01	5.683E+02
19.42.30	1.152E+02	1.056E+01	1.378E+01	1.751E+00	2.579E+01	1.660E+01	5.664E+02
19.42.40	1.173E+02	7.779E+00	1.391E+01	1.825E+00	2.570E+01	1.732E+01	5.646E+02
19.42.50	1.166E+02	8.777E+00	1.324E+01	1.798E+00	2.566E+01	1.756E+01	5.652E+02
19.43.00	1.152E+02	8.944E+00	1.134E+01	1.818E+00	2.573E+01	1.708E+01	5.670E+02
19.43.10	1.145E+02	8.652E+00	1.022E+01	1.777E+00	2.592E+01	1.628E+01	5.640E+02
19.43.20	1.118E+02	8.112E+00	1.113E+01		2.586E+01	1.636E+01	5.646E+02
19.43.30	1.171E+02	6.822E+00	1.142E+01		2.583E+01	1.632E+01	5.658E+02
19.43.40	1.152E+02	8.278E+00	1.022E+01		2.602E+01	1.556E+01	5.634E+02
19.43.50	1.101E+02	8.236E+00	7.824E+00	1.762E+00	2.608E+01	1.512E+01	5.652E+02
19.44.00	1.115E+02	5.574E+00	9.563E+00	1.668E+00	2.601E+01	1.536E+01	5.658E+02
19.44.10	1.104E+02	6.739E+00	1.080E+01	1.694E+00	2.603E+01	1.512E+01	5.664E+02
19.44.20	1.096E+02	7.404E+00	1.018E+01	1.735E+00	2.608E+01	1.504E+01	5.670E+02
19.44.30	1.089E+02	1.015E+01	1.022E+01	1.726E+00	2.623E+01	1.408E+01	5.670E+02
19.44.40	1.091E+02	7.113E+00	1.163E+01	1.638E+00	2.635E+01	1.368E+01	5.628E+02
19.44.50	1.052E+02	5.532E+00	1.386E+01	1.722E+00	2.631E+01	1.400E+01	5.628E+02
19.45.00	1.103E+02	4.825E+00	1.320E+01	1.574E+00	2.624E+01	1.368E+01	5.677E+02
19.45.10	1.081E+02	6.697E+00	1.159E+01	1.598E+00	2.628E+01	1.352E+01	5.664E+02
19.45.20	1.075E+02	8.070E+00	1.175E+01	1.657E+00	2.628E+01	1.356E+01	5.646E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B6.- Continued

(k) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
19.45.30	1.081E+02	7.030E+00	9.936E+00		2.626E+01	1.360E+01	5.652E+02
19.45.40	1.113E+02	6.572E+00	9.604E+00		2.625E+01	1.340E+01	5.664E+02
19.45.50	1.087E+02	7.820E+00	9.025E+00		2.622E+01	1.364E+01	5.658E+02
19.46.00	1.098E+02	5.907E+00	8.280E+00		2.623E+01	1.368E+01	5.652E+02
19.46.10	1.086E+02	5.283E+00	8.321E+00		2.623E+01	1.384E+01	5.646E+02
19.46.20	1.126E+02	9.401E+00	9.522E+00		2.621E+01	1.380E+01	5.646E+02
19.46.30	1.149E+02	8.736E+00	1.043E+01		2.624E+01	1.340E+01	5.652E+02
19.46.40	1.089E+02	8.028E+00	1.117E+01		2.626E+01	1.316E+01	5.652E+02
19.46.50	1.078E+02	7.571E+00	1.175E+01		2.627E+01	1.316E+01	5.652E+02
19.47.00	1.039E+02	1.123E+01	1.184E+01		2.631E+01	1.276E+01	5.628E+02
19.47.10	1.021E+02	1.010E+01	1.366E+01		2.624E+01	1.296E+01	5.640E+02
19.47.20	1.031E+02	7.404E+00	1.299E+01		2.622E+01	1.320E+01	5.628E+02
19.47.30	9.820E+01	3.910E+00	1.068E+01		2.612E+01	1.380E+01	5.640E+02
19.47.40	1.009E+02	7.737E+00	9.687E+00		2.612E+01	1.396E+01	5.652E+02
19.47.50	9.794E+01	9.817E+00	9.811E+00		2.608E+01	1.432E+01	5.652E+02
19.48.00	1.019E+02	8.070E+00	1.217E+01		2.600E+01	1.488E+01	5.652E+02
19.48.10	1.063E+02	8.486E+00	1.237E+01		2.592E+01	1.572E+01	5.634E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B6.- Continued

(1) Leg D → C

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
19.55.00	9.797E+01	6.531E+00	9.356E+00	1.593E+00	2.577E+01	1.404E+01	5.622E+02
19.55.10	9.434E+01	8.652E+00	8.776E+00	1.538E+00	2.569E+01	1.500E+01	5.603E+02
19.55.20	9.365E+01	8.486E+00	9.439E+00	1.584E+00	2.560E+01	1.568E+01	5.622E+02
19.55.30	9.372E+01	8.195E+00	9.025E+00	1.660E+00	2.558E+01	1.560E+01	5.615E+02
19.55.40	9.728E+01	1.044E+01	1.233E+01	1.704E+00	2.557E+01	1.544E+01	5.622E+02
19.55.50	9.589E+01	8.236E+00	1.237E+01	1.730E+00	2.557E+01	1.556E+01	5.628E+02
19.56.00	9.781E+01	7.820E+00	1.353E+01	1.703E+00	2.554E+01	1.524E+01	5.658E+02
19.56.10	9.702E+01	8.528E+00	1.080E+01	1.687E+00	2.557E+01	1.528E+01	5.597E+02
19.56.20	9.550E+01	6.406E+00	9.977E+00	1.678E+00	2.556E+01	1.484E+01	5.640E+02
19.56.30	9.698E+01	8.153E+00	7.576E+00	1.580E+00	2.565E+01	1.448E+01	5.622E+02
19.56.40	9.603E+01	9.942E+00	5.837E+00	1.614E+00	2.563E+01	1.444E+01	5.628E+02
19.56.50	9.642E+01	1.031E+01	5.837E+00	1.619E+00	2.559E+01	1.464E+01	5.640E+02
19.57.00	9.553E+01	8.070E+00	9.155E+00	1.623E+00	2.557E+01	1.484E+01	5.646E+02
19.57.10	9.629E+01	7.321E+00	1.101E+01	1.642E+00	2.558E+01	1.488E+01	5.628E+02
19.57.20	9.748E+01	8.444E+00	1.126E+01	1.673E+00	2.560E+01	1.492E+01	5.634E+02
19.57.30	9.735E+01	8.028E+00	1.076E+01	1.573E+00	2.561E+01	1.500E+01	5.646E+02
19.57.40	9.381E+01	4.534E+00	9.315E+00	1.626E+00	2.563E+01	1.564E+01	5.628E+02
19.57.50	8.972E+01	3.993E+00	8.859E+00	1.626E+00	2.565E+01	1.568E+01	5.622E+02
19.58.00	9.378E+01	5.366E+00	9.646E+00	1.635E+00	2.566E+01	1.552E+01	5.658E+02
19.58.10	9.200E+01	1.110E+01	8.611E+00	1.636E+00	2.570E+01	1.576E+01	5.640E+02
19.58.20	9.441E+01	1.198E+01	8.735E+00	1.625E+00	2.571E+01	1.580E+01	5.628E+02
19.58.30	9.259E+01	9.318E+00	8.942E+00	1.662E+00	2.567E+01	1.588E+01	5.652E+02
19.58.40	9.240E+01	6.864E+00	1.026E+01	1.701E+00	2.566E+01	1.600E+01	5.652E+02
19.58.50	9.424E+01	7.030E+00	1.018E+01	1.700E+00	2.565E+01	1.592E+01	5.640E+02
19.59.00	9.306E+01	8.860E+00	1.014E+01	1.710E+00	2.564E+01	1.628E+01	5.640E+02
19.59.10	9.302E+01	8.153E+00	1.051E+01	1.714E+00	2.561E+01	1.632E+01	5.646E+02
19.59.20	9.355E+01	8.528E+00	1.039E+01	1.673E+00	2.559E+01	1.640E+01	5.652E+02
19.59.30	9.537E+01	8.070E+00	1.130E+01	1.757E+00	2.558E+01	1.636E+01	5.646E+02
19.59.40	9.428E+01	8.652E+00	1.055E+01	1.721E+00	2.560E+01	1.604E+01	5.652E+02
19.59.50	9.424E+01	8.444E+00	1.192E+01	1.740E+00	2.563E+01	1.588E+01	5.658E+02
20.00.00	9.543E+01	6.198E+00	1.126E+01	1.690E+00	2.562E+01	1.600E+01	5.646E+02
20.00.10	9.527E+01	5.907E+00	1.092E+01	1.683E+00	2.557E+01	1.628E+01	5.658E+02
20.00.20	9.652E+01	6.905E+00	9.522E+00	1.738E+00	2.557E+01	1.632E+01	5.652E+02
20.00.30	9.771E+01	8.153E+00	1.010E+01	1.650E+00	2.556E+01	1.636E+01	5.658E+02
20.00.40	9.659E+01	7.072E+00	1.171E+01	1.696E+00	2.557E+01	1.644E+01	5.646E+02
20.00.50	9.735E+01	7.488E+00	1.304E+01	1.759E+00	2.557E+01	1.644E+01	5.646E+02
20.01.00	9.579E+01	8.278E+00	1.237E+01	1.765E+00	2.557E+01	1.664E+01	5.646E+02
20.01.10	9.860E+01	5.740E+00	1.113E+01	1.737E+00	2.558E+01	1.676E+01	5.640E+02
20.01.20	9.573E+01	6.988E+00	1.035E+01	1.759E+00	2.558E+01	1.676E+01	5.646E+02
20.01.30	9.546E+01	4.784E+00	9.646E+00	1.737E+00	2.555E+01	1.684E+01	5.646E+02
20.01.40	1.000E+02	9.526E+00	1.051E+01	1.764E+00	2.555E+01	1.680E+01	5.640E+02
20.01.50	9.969E+01	8.153E+00	8.569E+00		2.558E+01	1.608E+01	5.695E+02
20.02.00	9.969E+01	8.403E+00	8.652E+00		2.562E+01	1.636E+01	5.646E+02
20.02.10	9.702E+01	7.155E+00	7.866E+00		2.556E+01	1.608E+01	5.695E+02
20.02.20	9.896E+01	4.908E+00	7.659E+00		2.553E+01	1.600E+01	5.707E+02
20.02.30	9.609E+01	4.784E+00	9.025E+00		2.549E+01	1.676E+01	5.670E+02
20.02.40	1.004E+02	6.032E+00	8.280E+00		2.549E+01	1.672E+01	5.707E+02
20.02.50	9.992E+01	7.280E+00	1.101E+01		2.569E+01	1.628E+01	5.646E+02
20.03.00	9.810E+01	8.320E+00	1.246E+01		2.583E+01	1.548E+01	5.640E+02
20.03.10	9.867E+01	5.740E+00	1.126E+01	1.731E+00	2.580E+01	1.564E+01	5.658E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B6.- Continued

(1) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
20.03.20	9.860E+01	6.073E+00	1.101E+01	1.764E+00	2.581E+01	1.548E+01	5.658E+02
20.03.30	9.906E+01	6.614E+00	9.604E+00	1.771E+00	2.587E+01	1.560E+01	5.628E+02
20.03.40	9.933E+01	8.361E+00	8.445E+00	1.763E+00	2.593E+01	1.528E+01	5.646E+02
20.03.50	1.014E+02	6.572E+00	9.646E+00	1.660E+00	2.607E+01	1.416E+01	5.634E+02
20.04.00	9.972E+01	7.529E+00	1.006E+01	1.656E+00	2.597E+01	1.536E+01	5.646E+02
20.04.10	9.982E+01	4.534E+00	9.439E+00	1.683E+00	2.609E+01	1.480E+01	5.634E+02
20.04.20	9.896E+01	8.278E+00	1.022E+01	1.613E+00	2.620E+01	1.460E+01	5.628E+02
20.04.30	9.817E+01	8.320E+00	1.225E+01	1.590E+00	2.636E+01	1.396E+01	5.628E+02
20.04.40	9.306E+01	7.321E+00	9.356E+00	1.627E+00	2.644E+01	1.280E+01	5.628E+02
20.04.50	9.497E+01	5.408E+00	9.232E+00	1.627E+00	2.631E+01	1.312E+01	5.640E+02
20.05.00	9.566E+01	5.616E+00	9.894E+00	1.539E+00	2.644E+01	1.236E+01	5.670E+02
20.05.10	9.273E+01	5.200E+00	1.043E+01	1.566E+00	2.671E+01	1.148E+01	5.634E+02
20.05.20	9.388E+01	8.278E+00	1.035E+01	1.628E+00	2.669E+01	1.224E+01	5.615E+02
20.05.30	9.566E+01	4.992E+00	1.188E+01	1.573E+00	2.646E+01	1.336E+01	5.615E+02
20.05.40	9.579E+01	7.571E+00	1.146E+01	1.657E+00	2.626E+01	1.408E+01	5.622E+02
20.05.50	9.754E+01	6.198E+00	9.977E+00	1.671E+00	2.633E+01	1.360E+01	5.664E+02
20.06.00	9.507E+01	6.572E+00	8.362E+00	1.629E+00	2.631E+01	1.384E+01	5.658E+02
20.06.10	9.583E+01	7.321E+00	9.439E+00	1.656E+00	2.638E+01	1.420E+01	5.634E+02
20.06.20	9.692E+01	9.651E+00	9.439E+00	1.615E+00	2.626E+01	1.520E+01	5.640E+02
20.06.30	9.619E+01	8.985E+00	9.273E+00	1.705E+00	2.613E+01	1.560E+01	5.640E+02
20.06.40	9.467E+01	9.193E+00	7.286E+00	1.696E+00	2.614E+01	1.508E+01	5.689E+02
20.06.50	9.774E+01	7.696E+00	7.741E+00	1.696E+00	2.603E+01	1.608E+01	5.658E+02
20.07.00	9.857E+01	3.993E+00	7.741E+00	1.737E+00	2.588E+01	1.688E+01	5.640E+02
20.07.10	1.010E+02	6.656E+00	9.108E+00	1.779E+00	2.584E+01	1.740E+01	5.640E+02
20.07.20	1.029E+02	7.612E+00	1.014E+01	1.805E+00	2.579E+01	1.788E+01	5.615E+02
20.07.30	1.056E+02	9.027E+00	9.149E+00	1.786E+00	2.561E+01	1.832E+01	5.664E+02
20.07.40	1.066E+02	9.235E+00	9.439E+00	1.766E+00	2.579E+01	1.836E+01	5.622E+02
20.07.50	1.075E+02	1.056E+01	9.894E+00	1.854E+00	2.582E+01	1.832E+01	5.634E+02
20.08.00	1.057E+02	8.777E+00	1.035E+01	1.926E+00	2.595E+01	1.820E+01	5.646E+02
20.08.10	1.015E+02	1.210E+01	1.184E+01	1.918E+00	2.613E+01	1.708E+01	5.640E+02
20.08.20	1.021E+02	9.568E+00	9.770E+00	1.886E+00	2.618E+01	1.716E+01	5.640E+02
20.08.30	1.007E+02	6.073E+00	7.990E+00	1.805E+00	2.630E+01	1.620E+01	5.640E+02
20.08.40	9.952E+01	6.905E+00	8.031E+00	1.790E+00	2.654E+01	1.592E+01	5.597E+02
20.08.50	9.926E+01	6.864E+00	7.410E+00	1.875E+00	2.648E+01	1.600E+01	5.628E+02
20.09.00	9.777E+01	8.985E+00	7.783E+00	1.792E+00	2.644E+01	1.568E+01	5.628E+02
20.09.10	9.824E+01	8.819E+00	1.014E+01	1.722E+00	2.623E+01	1.684E+01	5.652E+02
20.09.20	9.744E+01	9.651E+00	9.397E+00	1.736E+00	2.624E+01	1.688E+01	5.628E+02
20.09.30	9.933E+01	6.988E+00	7.452E+00	1.840E+00	2.623E+01	1.716E+01	5.609E+02
20.09.40	9.787E+01	6.697E+00	7.700E+00	1.863E+00	2.623E+01	1.760E+01	5.689E+02
20.09.50	1.006E+02	5.657E+00	8.694E+00	1.779E+00	2.664E+01	1.556E+01	5.603E+02
20.10.00	9.731E+01	7.862E+00	8.694E+00	1.716E+00	2.633E+01	1.668E+01	5.615E+02
20.10.10	1.000E+02	8.486E+00	8.818E+00	1.832E+00	2.610E+01	1.732E+01	5.664E+02
20.10.20	9.985E+01	6.281E+00	8.776E+00	1.840E+00	2.626E+01	1.732E+01	5.646E+02
20.10.30	1.018E+02	5.532E+00	9.604E+00	1.826E+00	2.636E+01	1.712E+01	5.622E+02
20.10.40	9.999E+01	5.865E+00	1.055E+01	1.804E+00	2.613E+01	1.752E+01	5.646E+02
20.10.50	1.005E+02	5.324E+00	9.356E+00	1.815E+00	2.600E+01	1.756E+01	5.652E+02
20.11.00	9.685E+01	6.739E+00	8.362E+00	1.801E+00	2.605E+01	1.780E+01	5.658E+02
20.11.10	9.995E+01	7.030E+00	9.190E+00	1.738E+00	2.613E+01	1.760E+01	5.609E+02
20.11.20	1.027E+02	6.988E+00	1.014E+01	1.784E+00	2.599E+01	1.752E+01	5.652E+02
20.11.30	1.047E+02	6.073E+00	1.026E+01	1.818E+00	2.606E+01	1.740E+01	5.652E+02

APPENDIX B

TABLE B6.- Continued

(1) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
20.11.40	1.032E+02	5.657E+00	9.977E+00	1.882E+00	2.617E+01	1.724E+01	5.622E+02
20.11.50	1.026E+02	4.742E+00	1.138E+01	1.919E+00	2.610E+01	1.748E+01	5.628E+02
20.12.00	1.037E+02	8.195E+00	1.163E+01	1.821E+00	2.597E+01	1.780E+01	5.622E+02
20.12.10	1.017E+02	7.363E+00	1.105E+01	1.822E+00	2.598E+01	1.780E+01	5.634E+02
20.12.20	1.010E+02	7.404E+00	1.014E+01	1.752E+00	2.598E+01	1.768E+01	5.640E+02
20.12.30	1.023E+02	6.281E+00	9.066E+00	1.791E+00	2.619E+01	1.728E+01	5.646E+02
20.12.40	1.081E+02	7.737E+00	1.138E+01	1.850E+00	2.635E+01	1.716E+01	5.640E+02
20.12.50	1.107E+02	7.529E+00	1.146E+01	1.819E+00	2.643E+01	1.700E+01	5.628E+02
20.13.00	1.093E+02	6.947E+00	1.063E+01	1.769E+00	2.644E+01	1.688E+01	5.640E+02
20.13.10	1.086E+02	8.902E+00	1.084E+01	1.811E+00	2.646E+01	1.676E+01	5.640E+02
20.13.20	1.077E+02	9.027E+00	1.117E+01	1.845E+00	2.651E+01	1.684E+01	5.622E+02
20.13.30	1.072E+02	8.569E+00	1.126E+01	1.932E+00	2.653E+01	1.700E+01	5.622E+02
20.13.40	1.079E+02	6.323E+00	1.010E+01	1.825E+00	2.655E+01	1.700E+01	5.609E+02
20.13.50	1.043E+02	4.825E+00	9.604E+00	1.786E+00	2.653E+01	1.700E+01	5.615E+02
20.14.00	1.047E+02	6.240E+00	8.404E+00	1.860E+00	2.650E+01	1.700E+01	5.622E+02
20.14.10	1.075E+02	4.659E+00	8.859E+00	1.790E+00	2.647E+01	1.700E+01	5.628E+02
20.14.20	1.037E+02	6.905E+00	9.853E+00	1.784E+00	2.647E+01	1.700E+01	5.628E+02
20.14.30	1.063E+02	5.740E+00	8.859E+00	1.836E+00	2.647E+01	1.696E+01	5.634E+02
20.14.40	1.047E+02	6.032E+00	8.652E+00	1.881E+00	2.647E+01	1.692E+01	5.634E+02
20.14.50	1.085E+02	7.030E+00	9.108E+00	1.897E+00	2.647E+01	1.692E+01	5.634E+02
20.15.00	1.070E+02	6.198E+00	9.356E+00	1.839E+00	2.652E+01	1.676E+01	5.640E+02
20.15.10	1.059E+02	4.867E+00	8.155E+00	1.780E+00	2.658E+01	1.664E+01	5.634E+02
20.15.20	1.052E+02	5.283E+00	9.232E+00	1.794E+00	2.660E+01	1.664E+01	5.634E+02
20.15.30	1.065E+02	7.196E+00	7.741E+00	1.801E+00	2.665E+01	1.668E+01	5.628E+02
20.15.40	1.065E+02	6.864E+00	8.901E+00	1.853E+00	2.667E+01	1.684E+01	5.628E+02
20.15.50	1.057E+02	4.867E+00	9.273E+00	1.818E+00	2.666E+01	1.704E+01	5.640E+02
20.16.00	1.055E+02	4.950E+00	1.030E+01	1.774E+00	2.670E+01	1.676E+01	5.646E+02
20.16.10	1.057E+02	6.281E+00	8.818E+00	1.676E+00	2.668E+01	1.692E+01	5.640E+02
20.16.20	1.067E+02	6.905E+00	6.417E+00	1.700E+00	2.675E+01	1.656E+01	5.622E+02
20.16.30	1.087E+02	4.243E+00	8.569E+00	1.702E+00	2.682E+01	1.556E+01	5.652E+02
20.16.40	1.029E+02	9.318E+00	8.031E+00	1.663E+00	2.683E+01	1.580E+01	5.628E+02
20.16.50	1.051E+02	1.110E+01	8.280E+00	1.750E+00	2.681E+01	1.600E+01	5.622E+02
20.17.00	1.079E+02	9.318E+00	9.066E+00	1.760E+00	2.690E+01	1.600E+01	5.536E+02

APPENDIX B

TABLE B6.- Continued

(m) Leg E → F

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{ap} , °C	h, m
20.28.00	1.002E+02	6.656E+00	1.217E+01	1.901E+00	2.686E+01	1.796E+01	5.701E+02
20.28.10	1.002E+02	7.737E+00	1.097E+01	1.648E+00	2.682E+01	1.812E+01	5.719E+02
20.28.20	9.995E+01	8.070E+00	1.117E+01	1.531E+00	2.689E+01	1.776E+01	5.677E+02
20.28.30	1.023E+02	8.569E+00	1.188E+01	1.597E+00	2.699E+01	1.744E+01	5.658E+02
20.28.40	9.883E+01	7.612E+00	1.105E+01	1.886E+00	2.699E+01	1.732E+01	5.652E+02
20.28.50	9.804E+01	6.947E+00	9.149E+00	1.891E+00	2.699E+01	1.724E+01	5.664E+02
20.29.00	9.834E+01	6.448E+00	7.783E+00	1.705E+00	2.702E+01	1.708E+01	5.628E+02
20.29.10	9.520E+01	8.236E+00	8.445E+00	1.718E+00	2.696E+01	1.684E+01	5.683E+02
20.29.20	9.599E+01	6.364E+00	9.936E+00	1.526E+00	2.700E+01	1.656E+01	5.670E+02
20.29.30	9.385E+01	5.907E+00	8.569E+00	1.388E+00	2.688E+01	1.708E+01	5.677E+02
20.29.40	9.424E+01	6.822E+00	8.859E+00	1.439E+00	2.690E+01	1.672E+01	5.670E+02
20.29.50	9.721E+01	6.822E+00	7.907E+00	1.585E+00	2.690E+01	1.652E+01	5.670E+02
20.30.00	9.210E+01	7.488E+00	9.066E+00	1.607E+00	2.690E+01	1.640E+01	5.677E+02
20.30.10	9.391E+01	7.737E+00	9.480E+00	1.550E+00	2.680E+01	1.664E+01	5.701E+02
20.30.20	9.550E+01	5.158E+00	9.604E+00	1.669E+00	2.674E+01	1.676E+01	5.707E+02
20.30.30	9.817E+01	5.782E+00	1.030E+01	1.835E+00	2.663E+01	1.688E+01	5.738E+02
20.30.40	9.738E+01	6.032E+00	1.072E+01	1.607E+00	2.665E+01	1.684E+01	5.713E+02
20.30.50	9.860E+01	8.320E+00	1.022E+01	1.696E+00	2.669E+01	1.672E+01	5.707E+02
20.31.00	9.959E+01	6.822E+00	8.776E+00	1.661E+00	2.678E+01	1.612E+01	5.713E+02
20.31.10	9.579E+01	7.030E+00	8.114E+00	1.750E+00	2.677E+01	1.596E+01	5.719E+02
20.31.20	9.537E+01	9.110E+00	8.652E+00	1.876E+00	2.691E+01	1.572E+01	5.713E+02
20.31.30	9.296E+01	8.278E+00	9.480E+00	1.801E+00	2.694E+01	1.468E+01	5.707E+02
20.31.40	9.358E+01	7.113E+00	1.063E+01	1.607E+00	2.694E+01	1.468E+01	5.695E+02
20.31.50	9.378E+01	4.908E+00	1.026E+01	1.760E+00	2.707E+01	1.388E+01	5.683E+02
20.32.00	9.157E+01	4.825E+00	1.196E+01	1.711E+00	2.704E+01	1.400E+01	5.683E+02
20.32.10	9.005E+01	5.907E+00	1.291E+01	1.447E+00	2.701E+01	1.460E+01	5.646E+02
20.32.20	8.890E+01	5.782E+00	1.159E+01	1.395E+00	2.688E+01	1.476E+01	5.719E+02
20.32.30	9.104E+01	5.948E+00	1.097E+01	1.547E+00	2.685E+01	1.496E+01	5.701E+02
20.32.40	9.385E+01	7.945E+00	9.066E+00	1.626E+00	2.685E+01	1.460E+01	5.707E+02
20.32.50	9.137E+01	8.153E+00	7.907E+00	1.643E+00	2.686E+01	1.452E+01	5.707E+02
20.33.00	9.018E+01	7.571E+00	8.155E+00	1.625E+00	2.691E+01	1.368E+01	5.725E+02
20.33.10	9.068E+01	6.448E+00	7.452E+00	1.435E+00	2.689E+01	1.408E+01	5.707E+02
20.33.20	9.088E+01	6.905E+00	5.216E+00	1.749E+00	2.681E+01	1.500E+01	5.707E+02
20.33.30	9.474E+01	6.448E+00	5.382E+00	1.888E+00	2.676E+01	1.564E+01	5.695E+02
20.33.40	9.573E+01	5.449E+00	5.506E+00	1.834E+00	2.663E+01	1.624E+01	5.707E+02
20.33.50	9.721E+01	6.240E+00	6.375E+00	1.643E+00	2.659E+01	1.648E+01	5.707E+02
20.34.00	1.000E+02	7.196E+00	8.528E+00	1.588E+00	2.656E+01	1.656E+01	5.701E+02
20.34.10	1.007E+02	6.572E+00	1.068E+01	1.807E+00	2.658E+01	1.592E+01	5.701E+02
20.34.20	9.939E+01	7.945E+00	1.035E+01	1.646E+00	2.660E+01	1.548E+01	5.695E+02
20.34.30	1.072E+02	6.489E+00	9.149E+00	1.601E+00	2.658E+01	1.560E+01	5.707E+02
20.34.40	1.141E+02	7.904E+00	1.030E+01	1.783E+00	2.654E+01	1.588E+01	5.713E+02
20.34.50	1.164E+02	5.449E+00	1.229E+01	1.629E+00	2.659E+01	1.568E+01	5.701E+02
20.35.00	1.159E+02	7.404E+00	1.328E+01	1.641E+00	2.661E+01	1.596E+01	5.689E+02
20.35.10	1.130E+02	5.907E+00	1.312E+01	1.656E+00	2.661E+01	1.628E+01	5.707E+02
20.35.20	1.117E+02	5.824E+00	1.221E+01	1.683E+00	2.666E+01	1.608E+01	5.707E+02
20.35.30	1.127E+02	7.904E+00	1.076E+01	1.769E+00	2.664E+01	1.644E+01	5.701E+02
20.35.40	1.111E+02	7.488E+00	1.072E+01	1.668E+00	2.665E+01	1.644E+01	5.701E+02
20.35.50	1.133E+02	6.572E+00	9.936E+00	1.640E+00	2.661E+01	1.652E+01	5.695E+02
20.36.00	1.146E+02	2.662E+00	1.088E+01	1.619E+00	2.662E+01	1.628E+01	5.689E+02
20.36.10	1.173E+02	7.321E+00	9.397E+00	1.647E+00	2.662E+01	1.608E+01	5.707E+02

APPENDIX B

TABLE B6.- Continued

(m) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
20.36.20	1.225E+02	4.492E+00	1.105E+01	1.666E+00	2.656E+01	1.624E+01	5.683E+02
20.36.30	1.152E+02	3.536E+00	1.188E+01	1.615E+00	2.657E+01	1.612E+01	5.677E+02
20.36.40	1.170E+02	5.158E+00	9.853E+00	1.621E+00	2.666E+01	1.560E+01	5.695E+02
20.36.50	1.131E+02	6.572E+00	9.190E+00	1.636E+00	2.676E+01	1.508E+01	5.689E+02
20.37.00	1.130E+02	8.236E+00	8.694E+00	1.604E+00	2.651E+01	1.676E+01	5.695E+02
20.37.10	1.131E+02	5.408E+00	9.149E+00	1.613E+00	2.670E+01	1.604E+01	5.628E+02
20.37.20	1.106E+02	7.779E+00	9.563E+00	1.512E+00	2.669E+01	1.508E+01	5.677E+02
20.37.30	1.056E+02	8.028E+00	9.066E+00	1.599E+00	2.651E+01	1.624E+01	5.683E+02
20.37.40	1.061E+02	8.694E+00	1.006E+01	1.594E+00	2.646E+01	1.628E+01	5.701E+02
20.37.50	1.153E+02	4.035E+00	1.097E+01	1.599E+00	2.652E+01	1.604E+01	5.658E+02
20.38.00	1.082E+02	5.033E+00	9.687E+00	1.710E+00	2.628E+01	1.756E+01	5.689E+02
20.38.10	1.165E+02	7.196E+00	8.197E+00	1.790E+00	2.633E+01	1.712E+01	5.695E+02
20.38.20	1.130E+02	7.779E+00	9.894E+00	1.656E+00	2.637E+01	1.692E+01	5.719E+02
20.38.30	1.146E+02	5.366E+00	1.001E+01	1.590E+00	2.638E+01	1.740E+01	5.701E+02
20.38.40	1.157E+02	6.448E+00	1.043E+01	1.725E+00	2.644E+01	1.684E+01	5.664E+02
20.38.50	1.160E+02	7.987E+00	9.025E+00	1.745E+00	2.624E+01	1.792E+01	5.707E+02
20.39.00	1.177E+02	9.651E+00	7.286E+00	1.763E+00	2.615E+01	1.832E+01	5.695E+02
20.39.10	1.188E+02	6.739E+00	7.162E+00	1.777E+00	2.616E+01	1.788E+01	5.695E+02
20.39.20	1.183E+02	5.241E+00	7.824E+00	1.731E+00	2.626E+01	1.740E+01	5.670E+02
20.39.30	1.183E+02	6.406E+00	8.611E+00	1.704E+00	2.617E+01	1.752E+01	5.695E+02
20.39.40	1.177E+02	6.531E+00	8.321E+00	1.678E+00	2.617E+01	1.720E+01	5.707E+02
20.39.50	1.167E+02	7.779E+00	7.493E+00	1.895E+00	2.622E+01	1.684E+01	5.701E+02
20.40.00	1.175E+02	5.574E+00	7.700E+00	1.784E+00	2.615E+01	1.684E+01	5.725E+02
20.40.10	1.171E+02	3.286E+00	7.948E+00	1.536E+00	2.622E+01	1.648E+01	5.707E+02
20.40.20	1.199E+02	6.739E+00	1.080E+01	1.703E+00	2.618E+01	1.644E+01	5.713E+02
20.40.30	1.171E+02	5.907E+00	1.163E+01	1.895E+00	2.626E+01	1.624E+01	5.689E+02
20.40.40	1.176E+02	5.782E+00	1.208E+01	1.669E+00	2.622E+01	1.624E+01	5.695E+02
20.40.50	1.194E+02	5.116E+00	1.200E+01	1.578E+00	2.617E+01	1.640E+01	5.713E+02
20.41.00	1.192E+02	2.620E+00	1.250E+01	1.687E+00	2.616E+01	1.644E+01	5.713E+02
20.41.10	1.210E+02	3.744E+00	1.403E+01	1.692E+00	2.616E+01	1.628E+01	5.719E+02
20.41.20	1.189E+02	3.744E+00	1.362E+01		2.628E+01	1.576E+01	5.707E+02
20.41.30	1.184E+02	4.118E+00	1.440E+01		2.642E+01	1.448E+01	5.725E+02
20.41.40	1.135E+02	7.030E+00	1.246E+01	2.293E-01	2.641E+01	1.536E+01	5.707E+02
20.41.50	1.190E+02	4.201E+00	1.258E+01	1.535E+00	2.639E+01	1.568E+01	5.707E+02
20.42.00	1.171E+02	4.825E+00	1.204E+01	1.542E+00	2.645E+01	1.548E+01	5.707E+02
20.42.10	1.208E+02	8.153E+00	1.076E+01	1.638E+00	2.642E+01	1.548E+01	5.732E+02
20.42.20	1.170E+02	8.236E+00	1.010E+01	1.441E+00	2.642E+01	1.572E+01	5.713E+02
20.42.30	1.198E+02	7.280E+00	9.604E+00	1.677E+00	2.643E+01	1.568E+01	5.719E+02
20.42.40	1.187E+02	7.696E+00	8.280E+00	1.506E+00	2.639E+01	1.568E+01	5.719E+02
20.42.50	1.182E+02	7.862E+00	8.073E+00	1.597E+00	2.641E+01	1.536E+01	5.701E+02
20.43.00	1.217E+02	8.361E+00	8.238E+00	1.515E+00	2.638E+01	1.560E+01	5.707E+02
20.43.10	1.217E+02	8.070E+00	8.569E+00	1.565E+00	2.640E+01	1.572E+01	5.713E+02
20.43.20	1.184E+02	9.110E+00	8.528E+00	1.590E+00	2.642E+01	1.536E+01	5.719E+02
20.43.30	1.205E+02	7.571E+00	1.043E+01	1.557E+00	2.646E+01	1.488E+01	5.701E+02
20.43.40	1.206E+02	6.905E+00	1.184E+01	1.611E+00	2.636E+01	1.556E+01	5.707E+02
20.43.50	1.223E+02	6.822E+00	9.604E+00	1.606E+00	2.638E+01	1.532E+01	5.707E+02
20.44.00	1.223E+02	5.033E+00	7.907E+00	1.564E+00	2.640E+01	1.536E+01	5.701E+02
20.44.10	1.238E+02	8.611E+00	9.770E+00	1.601E+00	2.641E+01	1.556E+01	5.689E+02
20.44.20	1.230E+02	6.697E+00	1.068E+01	1.652E+00	2.649E+01	1.456E+01	5.701E+02
20.44.30	1.196E+02	5.740E+00	1.026E+01	1.634E+00	2.648E+01	1.428E+01	5.713E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B6.- Continued

(m) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
20.44.40	1.216E+02	5.158E+00	1.113E+01	1.553E+00	2.651E+01	1.412E+01	5.707E+02
20.44.50	1.199E+02	5.116E+00	1.171E+01	1.608E+00	2.647E+01	1.424E+01	5.707E+02
20.45.00	1.200E+02	8.694E+00	1.233E+01	1.561E+00	2.647E+01	1.420E+01	5.701E+02
20.45.10	1.211E+02	6.323E+00	1.159E+01	1.468E+00	2.652E+01	1.372E+01	5.695E+02
20.45.20	1.214E+02	5.116E+00	1.146E+01	1.464E+00	2.647E+01	1.408E+01	5.713E+02
20.45.30	1.204E+02	5.657E+00	1.039E+01	1.533E+00	2.646E+01	1.388E+01	5.713E+02
20.45.40	1.156E+02	8.902E+00	9.563E+00	1.567E+00	2.647E+01	1.368E+01	5.701E+02
20.45.50	1.167E+02	6.780E+00	8.155E+00	1.604E+00	2.636E+01	1.476E+01	5.695E+02
20.46.00	1.191E+02	4.576E+00	7.203E+00	1.574E+00	2.642E+01	1.396E+01	5.689E+02
20.46.10	1.171E+02	4.534E+00	8.942E+00	1.595E+00	2.653E+01	1.292E+01	5.677E+02
20.46.20	1.161E+02	7.862E+00	9.356E+00	1.543E+00	2.646E+01	1.328E+01	5.695E+02
20.46.30	1.151E+02	7.529E+00	1.010E+01	1.571E+00	2.634E+01	1.468E+01	5.701E+02
20.46.40	1.130E+02	8.028E+00	9.936E+00	1.591E+00	2.632E+01	1.484E+01	5.683E+02
20.46.50	1.116E+02	4.201E+00	1.097E+01	1.625E+00	2.628E+01	1.432E+01	5.701E+02
20.47.00	1.070E+02	4.534E+00	1.221E+01	1.643E+00	2.618E+01	1.576E+01	5.695E+02
20.47.10	1.121E+02	5.616E+00	1.097E+01	1.612E+00	2.619E+01	1.588E+01	5.689E+02
20.47.20	1.131E+02	6.032E+00	1.014E+01	1.618E+00	2.610E+01	1.600E+01	5.707E+02

APPENDIX B

TABLE B6.- Continued

(n) Spiral at H

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
21.00.30	9.622E+01	6.780E+00	1.051E+01		2.651E+01	1.964E+01	5.701E+02
21.00.40	9.230E+01	4.784E+00	1.088E+01		2.645E+01	1.580E+01	5.842E+02
21.00.50	9.243E+01	6.240E+00	1.192E+01		2.629E+01	1.928E+01	6.172E+02
21.01.00	9.322E+01	4.534E+00	1.275E+01		2.604E+01	1.876E+01	6.550E+02
21.01.10	9.352E+01	9.276E+00	1.366E+01		2.568E+01	1.848E+01	6.966E+02
21.01.20	9.537E+01	7.155E+00	1.378E+01		2.541E+01	1.808E+01	7.375E+02
21.01.30	1.017E+02	7.113E+00	1.213E+01		2.501E+01	1.792E+01	7.767E+02
21.01.40	1.056E+02	5.948E+00	1.275E+01		2.475E+01	1.760E+01	8.090E+02
21.01.50	1.083E+02	6.406E+00	1.498E+01		2.453E+01	1.736E+01	8.353E+02
21.02.00	1.087E+02	7.820E+00	1.656E+01		2.445E+01	1.684E+01	8.598E+02
21.02.10	1.106E+02	7.904E+00	1.676E+01		2.437E+01	1.604E+01	8.860E+02
21.02.20	1.162E+02	6.489E+00	1.693E+01		2.404E+01	1.400E+01	9.141E+02
21.02.30	1.200E+02	2.870E+00	1.639E+01		2.384E+01	1.276E+01	9.435E+02
21.02.40	1.231E+02	2.038E+00	1.598E+01		2.364E+01	1.548E+01	9.722E+02
21.02.50	1.295E+02	5.241E+00	1.767E+01		2.342E+01	1.516E+01	1.000E+03
21.03.00	1.296E+02	8.070E+00	1.805E+01		2.312E+01	1.512E+01	1.031E+03
21.03.10	1.280E+02	7.612E+00	1.709E+01		2.283E+01	1.496E+01	1.060E+03
21.03.20	1.285E+02	8.195E+00	1.842E+01		2.244E+01	1.472E+01	1.099E+03
21.03.30	1.261E+02	8.569E+00	1.647E+01		2.205E+01	1.468E+01	1.139E+03
21.03.40	1.243E+02	5.033E+00	1.548E+01		2.173E+01	1.452E+01	1.172E+03
21.03.50	1.209E+02	4.825E+00	1.482E+01		2.141E+01	1.452E+01	1.205E+03
21.04.00	1.238E+02	7.363E+00	1.486E+01		2.110E+01	1.444E+01	1.238E+03
21.04.10	1.230E+02	6.988E+00	1.531E+01		2.078E+01	1.432E+01	1.272E+03
21.04.20	1.209E+02	6.198E+00	1.598E+01		2.048E+01	1.400E+01	1.309E+03
21.04.30	1.200E+02	6.905E+00	1.560E+01		2.013E+01	1.396E+01	1.346E+03
21.04.40	1.173E+02	6.198E+00	1.415E+01		1.971E+01	1.408E+01	1.382E+03
21.04.50	1.137E+02	5.616E+00	1.494E+01		1.945E+01	1.356E+01	1.415E+03
21.05.00	1.160E+02	4.160E+00	1.606E+01		1.919E+01	1.340E+01	1.442E+03
21.05.10	1.094E+02	5.408E+00	1.453E+01		1.964E+01	1.104E+01	1.467E+03
21.05.20	9.801E+01	8.611E+00	1.411E+01		1.993E+01	7.240E+00	1.484E+03
21.05.30	8.698E+01	1.035E+01	1.333E+01		1.911E+01	1.392E+01	1.504E+03
21.05.40	1.001E+02	9.401E+00	1.217E+01		1.916E+01	7.640E+00	1.489E+03

*No data due to instrument malfunction.

APPENDIX B

TABLE B6.- Concluded

(o) Leg H → G

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
21.09.20	1.061E+02	7.945E+00	1.564E+01		2.626E+01	1.564E+01	5.756E+02
21.09.30	1.033E+02	5.158E+00	1.598E+01		2.622E+01	1.704E+01	5.793E+02
21.09.40	1.026E+02	6.947E+00	1.411E+01		2.627E+01	1.920E+01	5.799E+02
21.09.50	1.029E+02	6.572E+00	1.428E+01		2.641E+01	1.920E+01	5.738E+02
21.10.00	1.055E+02	8.403E+00	1.407E+01		2.641E+01	1.908E+01	5.793E+02
21.10.10	1.073E+02	7.779E+00	1.395E+01		2.643E+01	1.904E+01	5.750E+02
21.10.20	1.110E+02	4.118E+00	1.598E+01		2.646E+01	1.896E+01	5.780E+02
21.10.30	1.153E+02	7.737E+00	1.651E+01		2.666E+01	1.792E+01	5.756E+02
21.10.40	1.193E+02	9.110E+00	1.747E+01		2.684E+01	1.820E+01	5.768E+02
21.10.50	1.243E+02	8.070E+00	1.974E+01		2.695E+01	1.776E+01	5.744E+02
21.11.00	1.336E+02	5.033E+00	1.647E+01		2.706E+01	1.792E+01	5.732E+02
21.11.10	1.385E+02	6.281E+00	1.540E+01		2.708E+01	1.788E+01	5.719E+02
21.11.20	1.444E+02	5.907E+00	1.552E+01		2.738E+01	1.700E+01	5.719E+02
21.11.30	1.470E+02	6.739E+00	1.660E+01		2.750E+01	1.636E+01	5.713E+02
21.11.40	1.465E+02	7.737E+00	1.552E+01		2.751E+01	1.596E+01	5.719E+02
21.11.50	1.462E+02	9.526E+00	1.316E+01		2.758E+01	1.584E+01	5.713E+02
21.12.00	1.427E+02	8.902E+00	1.411E+01		2.750E+01	1.624E+01	5.683E+02
21.12.10	1.435E+02	9.027E+00	1.362E+01		2.749E+01	1.604E+01	5.701E+02
21.12.20	1.391E+02	9.152E+00	1.544E+01		2.742E+01	1.672E+01	5.713E+02
21.12.30	1.370E+02	6.323E+00	1.602E+01		2.759E+01	1.624E+01	5.701E+02
21.12.40	1.335E+02	1.002E+01	1.585E+01		2.763E+01	1.632E+01	5.707E+02
21.12.50	1.229E+02	8.320E+00	1.544E+01		2.763E+01	1.588E+01	5.695E+02
21.13.00	1.167E+02	7.030E+00	1.316E+01		2.764E+01	1.584E+01	5.701E+02
21.13.10	1.177E+02	4.160E+00	1.523E+01		2.773E+01	1.452E+01	5.689E+02
21.13.20	1.185E+02	5.990E+00	1.362E+01		2.758E+01	1.572E+01	5.701E+02
21.13.30	1.198E+02	7.280E+00	1.420E+01		2.754E+01	1.592E+01	5.701E+02
21.13.40	1.178E+02	5.907E+00	1.457E+01		2.760E+01	1.568E+01	5.725E+02
21.13.50	1.133E+02	6.406E+00	1.411E+01		2.767E+01	1.572E+01	5.701E+02
21.14.00	1.114E+02	8.985E+00	1.213E+01		2.762E+01	1.560E+01	5.707E+02
21.14.10	1.132E+02	5.699E+00	1.316E+01		2.749E+01	1.500E+01	5.701E+02
21.14.20	1.104E+02	5.616E+00	1.192E+01		2.771E+01	1.524E+01	5.707E+02
21.14.30	1.119E+02	6.323E+00	1.386E+01		2.777E+01	1.504E+01	5.683E+02
21.14.40	1.110E+02	3.660E+00	1.341E+01		2.747E+01	1.532E+01	5.689E+02
21.14.50	1.052E+02	3.036E+00	1.175E+01		2.770E+01	1.424E+01	5.744E+02
21.15.00	9.853E+01	6.240E+00	1.039E+01		2.775E+01	1.468E+01	5.695E+02
21.15.10	9.662E+01	4.742E+00	1.101E+01		2.785E+01	1.376E+01	5.713E+02
21.15.20	9.801E+01	2.246E+00	1.179E+01		2.796E+01	1.372E+01	5.683E+02
21.15.30	1.028E+02	8.320E+00	1.188E+01		2.790E+01	1.448E+01	5.689E+02
21.15.40	1.021E+02	9.942E+00	1.179E+01		2.798E+01	1.352E+01	5.689E+02
21.15.50	9.711E+01	5.366E+00	1.063E+01		2.774E+01	1.452E+01	5.713E+02
21.16.00	9.913E+01	6.448E+00	8.818E+00		2.743E+01	1.604E+01	5.744E+02
21.16.10	1.004E+02	5.324E+00	7.369E+00		2.750E+01	1.608E+01	5.719E+02
21.16.20	1.068E+02	3.827E+00	8.569E+00		2.757E+01	1.576E+01	5.719E+02
21.16.30	1.159E+02	4.035E+00	1.130E+01		2.756E+01	1.524E+01	5.707E+02
21.16.40	1.121E+02	6.822E+00	1.006E+01		2.752E+01	1.568E+01	5.750E+02
21.16.50	1.104E+02	5.699E+00	1.101E+01		2.750E+01	1.592E+01	5.732E+02
21.17.00	1.016E+02	6.115E+00	1.117E+01		2.748E+01	1.600E+01	5.732E+02
21.17.10	1.061E+02	6.240E+00	1.192E+01		2.753E+01	1.588E+01	5.732E+02
21.17.20	1.075E+02	6.032E+00	1.266E+01		2.762E+01	1.584E+01	5.738E+02
21.17.30	1.060E+02	6.489E+00	1.250E+01		2.765E+01	1.588E+01	5.713E+02
21.17.40	1.064E+02	5.699E+00	1.461E+01		2.765E+01	1.576E+01	5.756E+02
21.17.50	1.024E+02	9.817E+00	1.593E+01		2.801E+01	1.500E+01	5.664E+02
21.18.00	1.048E+02	1.056E+01	1.519E+01		2.804E+01	1.412E+01	5.701E+02
21.18.10	9.926E+01	8.736E+00	1.436E+01		2.797E+01	1.396E+01	5.738E+02
21.18.20	1.000E+02	9.110E+00	1.453E+01		2.794E+01	1.452E+01	5.695E+02
21.18.30	1.013E+02	7.904E+00	1.295E+01		2.797E+01	1.448E+01	5.707E+02
21.18.40	1.011E+02	8.278E+00	1.250E+01		2.790E+01	1.468E+01	5.695E+02
21.18.50	1.027E+02	7.945E+00	1.229E+01		2.779E+01	1.484E+01	5.713E+02
21.19.00	1.016E+02	8.320E+00	1.063E+01		2.783E+01	1.404E+01	5.713E+02
21.19.10	1.004E+02	7.196E+00	1.113E+01		2.784E+01	1.412E+01	5.701E+02
21.19.20	9.480E+01	8.444E+00	9.770E+00		2.775E+01	1.468E+01	5.713E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B7.- AIRCRAFT DATA FOR PHOTOCHEMICAL OXIDANT BOX

EXPERIMENT ON JULY 24, 1978

(a) Leg G → H

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
09.36.40	4.474E+01	9.110E+00	9.232E+00	2.130E+00	2.912E+01	2.200E+01	2.719E+02
09.36.50	4.798E+01	9.027E+00	9.273E+00	2.100E+00	2.913E+01	2.196E+01	2.731E+02
09.37.00	4.735E+01	8.486E+00	8.776E+00	2.173E+00	2.936E+01	2.180E+01	2.713E+02
09.37.10	4.560E+01	8.528E+00	8.818E+00	2.143E+00	2.960E+01	2.164E+01	2.725E+02
09.37.20	4.847E+01	9.526E+00	1.001E+01	2.164E+00	2.954E+01	2.168E+01	2.713E+02
09.37.30	4.907E+01	9.526E+00	1.010E+01	2.127E+00	2.934E+01	2.184E+01	2.713E+02
09.37.40	4.788E+01	7.904E+00	9.397E+00	2.145E+00	2.908E+01	2.200E+01	2.737E+02
09.37.50	4.692E+01	8.112E+00	1.010E+01	2.129E+00	2.946E+01	2.160E+01	2.731E+02
09.38.00	4.715E+01	8.985E+00	1.014E+01	2.138E+00	2.941E+01	2.164E+01	2.719E+02
09.38.10	4.788E+01	7.529E+00	1.080E+01	2.121E+00	2.945E+01	2.156E+01	2.731E+02
09.38.20	4.755E+01	7.488E+00	1.030E+01	2.066E+00	2.920E+01	2.184E+01	2.707E+02
09.38.30	4.629E+01	7.280E+00	9.066E+00	2.103E+00	2.924E+01	2.180E+01	2.725E+02
09.38.40	4.742E+01	6.988E+00	9.108E+00	2.175E+00	2.916E+01	2.176E+01	2.731E+02
09.38.50	4.636E+01	7.155E+00	9.108E+00	2.100E+00	2.934E+01	2.156E+01	2.731E+02
09.39.00	4.679E+01	6.198E+00	8.404E+00	2.017E+00	2.914E+01	2.168E+01	2.743E+02
09.39.10	4.600E+01	7.072E+00	7.907E+00	2.018E+00	2.899E+01	2.180E+01	2.725E+02
09.39.20	4.497E+01	7.072E+00	7.659E+00	2.054E+00	2.879E+01	2.196E+01	2.719E+02
09.39.30	4.342E+01	8.985E+00	7.866E+00	1.978E+00	2.881E+01	2.184E+01	2.737E+02
09.39.40	4.369E+01	9.027E+00	7.576E+00	2.131E+00	2.869E+01	2.200E+01	2.713E+02
09.39.50	4.260E+01	7.987E+00	6.955E+00	2.039E+00	2.861E+01	2.212E+01	2.743E+02
09.40.00	4.237E+01	7.404E+00	7.741E+00	1.987E+00	2.867E+01	2.200E+01	2.725E+02
09.40.10	4.329E+01	6.531E+00	8.487E+00	1.801E+00	2.869E+01	2.204E+01	2.737E+02
09.40.20	4.088E+01	8.320E+00	1.026E+01		2.873E+01	2.028E+01	2.749E+02
09.40.30	4.230E+01	8.819E+00	1.030E+01		2.870E+01	2.196E+01	2.737E+02
09.40.40	4.405E+01	7.945E+00	9.356E+00		2.870E+01	2.196E+01	2.725E+02
09.40.50	4.273E+01	7.820E+00	9.066E+00	2.062E+00	2.878E+01	2.188E+01	2.719E+02
09.41.00	4.151E+01	6.198E+00	9.646E+00	2.082E+00	2.879E+01	2.188E+01	2.701E+02
09.41.10	4.210E+01	6.614E+00	1.006E+01	2.054E+00	2.866E+01	2.192E+01	2.725E+02
09.41.20	4.131E+01	6.739E+00	9.853E+00	2.068E+00	2.857E+01	2.200E+01	2.731E+02
09.41.30	4.108E+01	7.987E+00	9.604E+00	2.100E+00	2.850E+01	2.204E+01	2.725E+02
09.41.40	4.194E+01	8.777E+00	9.066E+00	2.117E+00	2.846E+01	2.208E+01	2.725E+02
09.41.50	4.055E+01	8.444E+00	9.108E+00	2.070E+00	2.875E+01	2.180E+01	2.737E+02
09.42.00	3.986E+01	8.652E+00	7.824E+00	2.136E+00	2.867E+01	2.192E+01	2.713E+02
09.42.10	4.141E+01	8.444E+00	8.362E+00	2.046E+00	2.873E+01	2.184E+01	2.713E+02
09.42.20	3.920E+01	8.153E+00	9.025E+00	1.979E+00	2.880E+01	2.180E+01	2.719E+02
09.42.30	4.039E+01	6.364E+00	1.039E+01	2.033E+00	2.888E+01	2.172E+01	2.725E+02
09.42.40	4.095E+01	7.030E+00	1.084E+01	2.118E+00	2.889E+01	2.176E+01	2.719E+02
09.42.50	4.075E+01	8.403E+00	1.109E+01	2.102E+00	2.914E+01	2.156E+01	2.713E+02
09.43.00	4.151E+01	7.446E+00	1.117E+01	2.015E+00	2.916E+01	2.156E+01	2.731E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B7.- Continued

(b) Leg F → E

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
09.49.40	4.781E+01	6.156E+00	1.001E+01	2.059E+00	2.811E+01	2.240E+01	2.713E+02
09.49.50	4.141E+01	7.488E+00	1.084E+01	2.090E+00	2.812E+01	2.236E+01	2.707E+02
09.50.00	4.016E+01	8.070E+00	1.068E+01	1.962E+00	2.883E+01	2.176E+01	2.731E+02
09.50.10	4.705E+01	7.321E+00	1.084E+01	1.945E+00	2.918E+01	2.160E+01	2.707E+02
09.50.20	4.943E+01	5.824E+00	1.155E+01	1.888E+00	2.939E+01	2.132E+01	2.737E+02
09.50.30	4.926E+01	7.196E+00	1.225E+01	1.881E+00	2.817E+01	2.224E+01	2.707E+02
09.50.40	4.247E+01	7.404E+00	1.254E+01	1.946E+00	2.856E+01	2.200E+01	2.749E+02
09.50.50	4.530E+01	9.734E+00	1.217E+01	2.032E+00	2.833E+01	2.224E+01	2.725E+02
09.51.00	4.527E+01	1.027E+01	1.179E+01	1.978E+00	2.829E+01	2.228E+01	2.731E+02
09.51.10	4.362E+01	9.068E+00	1.039E+01	1.959E+00	2.835E+01	2.232E+01	2.731E+02
09.51.20	4.623E+01	8.528E+00	9.687E+00	2.029E+00	2.827E+01	2.236E+01	2.731E+02
09.51.30	4.474E+01	7.446E+00	1.018E+01	1.992E+00	2.837E+01	2.236E+01	2.713E+02
09.51.40	4.405E+01	7.030E+00	1.010E+01	2.035E+00	2.832E+01	2.240E+01	2.713E+02
09.51.50	4.682E+01	6.697E+00	1.105E+01	2.029E+00	2.826E+01	2.236E+01	2.731E+02
09.52.00	4.448E+01	7.488E+00	1.051E+01	2.008E+00	2.855E+01	2.228E+01	2.713E+02
09.52.10	4.686E+01	7.280E+00	1.047E+01	2.006E+00	2.875E+01	2.216E+01	2.707E+02
09.52.20	5.012E+01	9.152E+00	1.059E+01	2.042E+00	2.883E+01	2.208E+01	2.737E+02
09.52.30	5.154E+01	7.696E+00	1.291E+01	2.003E+00	2.886E+01	2.204E+01	2.743E+02
09.52.40	5.177E+01	8.403E+00	1.184E+01	1.972E+00	2.861E+01	2.220E+01	2.737E+02
09.52.50	4.926E+01	7.820E+00	1.208E+01	2.031E+00	2.858E+01	2.224E+01	2.737E+02
09.53.00	4.860E+01	9.068E+00	1.266E+01	2.027E+00	2.854E+01	2.224E+01	2.731E+02
09.53.10	4.887E+01	7.238E+00	1.179E+01	1.909E+00	2.842E+01	2.228E+01	2.743E+02
09.53.20	4.867E+01	6.448E+00	9.729E+00	1.965E+00	2.828E+01	2.232E+01	2.731E+02
09.53.30	4.643E+01	7.072E+00	9.977E+00	2.028E+00	2.845E+01	2.228E+01	2.707E+02
09.53.40	4.672E+01	7.030E+00	9.687E+00	1.996E+00	2.842E+01	2.228E+01	2.731E+02
09.53.50	4.682E+01	8.361E+00	8.362E+00	2.035E+00	2.843E+01	2.220E+01	2.731E+02
09.54.00	4.834E+01	7.321E+00	8.569E+00	2.131E+00	2.835E+01	2.224E+01	2.737E+02
09.54.10	4.682E+01	6.656E+00	8.280E+00	2.066E+00	2.841E+01	2.220E+01	2.743E+02
09.54.20	4.778E+01	6.073E+00	9.190E+00	1.793E+00	2.796E+01	2.180E+01	2.768E+02
09.54.30	4.115E+01	7.612E+00	9.687E+00	1.864E+00	2.806E+01	2.228E+01	2.725E+02
09.54.40	4.461E+01	6.614E+00	1.068E+01	1.946E+00	2.807E+01	2.232E+01	2.713E+02
09.54.50	4.283E+01	7.280E+00	1.097E+01	2.054E+00	2.803E+01	2.232E+01	2.756E+02
09.55.00	4.266E+01	6.614E+00	1.134E+01	2.026E+00	2.837E+01	2.220E+01	2.719E+02
09.55.10	4.649E+01	7.529E+00	1.026E+01	1.953E+00	2.843E+01	2.216E+01	2.731E+02
09.55.20	4.676E+01	6.656E+00	1.035E+01	1.932E+00	2.849E+01	2.216E+01	2.743E+02
09.55.30	4.788E+01	7.696E+00	1.167E+01	1.967E+00	2.840E+01	2.220E+01	2.743E+02
09.55.40	4.596E+01	8.361E+00	1.076E+01	1.992E+00	2.834E+01	2.216E+01	2.731E+02
09.55.50	4.280E+01	9.110E+00	9.977E+00	2.048E+00	2.831E+01	2.216E+01	2.737E+02
09.56.00	4.059E+01	7.404E+00	1.130E+01	1.981E+00	2.830E+01	2.216E+01	2.719E+02
09.56.10	4.022E+01	8.112E+00	1.208E+01	2.004E+00	2.844E+01	2.208E+01	2.719E+02
09.56.20	4.435E+01	9.568E+00	1.353E+01	2.031E+00	2.837E+01	2.208E+01	2.731E+02
09.56.30	4.458E+01	7.904E+00	1.279E+01	1.836E+00	2.848E+01	2.208E+01	2.701E+02

APPENDIX B

TABLE B7.- Continued

(c) Leg C → D

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
10.01.30	4.115E+01	6.614E+00	1.026E+01	1.791E+00	2.807E+01	2.212E+01	2.749E+02
10.01.40	4.243E+01	7.072E+00	8.694E+00	1.849E+00	2.801E+01	2.212E+01	2.768E+02
10.01.50	4.171E+01	7.571E+00	1.022E+01	2.067E+00	2.810E+01	2.212E+01	2.694E+02
10.02.00	4.052E+01	7.488E+00	9.315E+00	1.817E+00	2.838E+01	2.212E+01	2.737E+02
10.02.10	4.214E+01	7.987E+00	9.770E+00	1.855E+00	2.845E+01	2.212E+01	2.701E+02
10.02.20	4.082E+01	9.568E+00	1.030E+01	1.970E+00	2.806E+01	2.216E+01	2.707E+02
10.02.30	4.191E+01	7.404E+00	1.134E+01	1.841E+00	2.784E+01	2.220E+01	2.701E+02
10.02.40	4.088E+01	6.531E+00	1.101E+01	1.801E+00	2.777E+01	2.224E+01	2.713E+02
10.02.50	3.709E+01	1.010E+01	1.146E+01	2.103E+00	2.788E+01	2.224E+01	2.737E+02
10.03.00	3.795E+01	9.984E+00	1.362E+01	1.960E+00	2.805E+01	2.220E+01	2.707E+02
10.03.10	3.903E+01	7.654E+00	1.395E+01	1.800E+00	2.822E+01	2.220E+01	2.719E+02
10.03.20	3.956E+01	7.280E+00	1.395E+01	1.955E+00	2.792E+01	2.228E+01	2.707E+02
10.03.30	3.917E+01	7.862E+00	1.432E+01	1.970E+00	2.778E+01	2.232E+01	2.694E+02
10.03.40	3.818E+01	7.321E+00	1.403E+01	1.719E+00	2.786E+01	2.228E+01	2.731E+02
10.03.50	3.887E+01	6.822E+00	1.353E+01	1.867E+00	2.779E+01	2.232E+01	2.707E+02
10.04.00	3.781E+01	6.780E+00	1.092E+01	1.925E+00	2.776E+01	2.232E+01	2.756E+02
10.04.10	3.933E+01	6.739E+00	1.068E+01	2.008E+00	2.784E+01	2.236E+01	2.749E+02
10.04.20	4.029E+01	6.281E+00	1.001E+01	1.780E+00	2.795E+01	2.236E+01	2.743E+02
10.04.30	4.134E+01	8.569E+00	1.146E+01	1.726E+00	2.818E+01	2.236E+01	2.749E+02
10.04.40	4.342E+01	8.444E+00	1.109E+01	1.832E+00	2.804E+01	2.240E+01	2.737E+02
10.04.50	4.286E+01	8.028E+00	1.213E+01	2.048E+00	2.813E+01	2.236E+01	2.743E+02
10.05.00	4.240E+01	8.569E+00	1.328E+01	2.034E+00	2.816E+01	2.240E+01	2.743E+02
10.05.10	4.468E+01	6.988E+00	1.126E+01	1.922E+00	2.814E+01	2.240E+01	2.749E+02
10.05.20	4.306E+01	5.824E+00	1.051E+01	1.900E+00	2.804E+01	2.240E+01	2.749E+02
10.05.30	4.128E+01	6.697E+00	9.397E+00	2.069E+00	2.829E+01	2.236E+01	2.743E+02
10.05.40	4.504E+01	7.529E+00	9.977E+00	2.151E+00	2.854E+01	2.228E+01	2.719E+02
10.05.50	4.870E+01	7.571E+00	1.109E+01	2.172E+00	2.830E+01	2.236E+01	2.743E+02
10.06.00	4.580E+01	6.988E+00	1.092E+01	2.239E+00	2.839E+01	2.232E+01	2.749E+02
10.06.10	4.778E+01	6.448E+00	1.043E+01	2.127E+00	2.831E+01	2.236E+01	2.737E+02
10.06.20	4.692E+01	7.862E+00	1.059E+01	1.758E+00	2.823E+01	2.240E+01	2.731E+02
10.06.30	4.369E+01	7.862E+00	1.043E+01	1.915E+00	2.838E+01	2.236E+01	2.743E+02
10.06.40	4.794E+01	7.196E+00	1.092E+01	2.184E+00	2.840E+01	2.232E+01	2.768E+02
10.06.50	4.748E+01	6.531E+00	1.101E+01	2.103E+00	2.835E+01	2.232E+01	2.737E+02
10.07.00	4.521E+01	6.281E+00	9.894E+00	1.862E+00	2.828E+01	2.236E+01	2.731E+02
10.07.10	4.497E+01	6.780E+00	9.439E+00	1.652E+00	2.835E+01	2.236E+01	2.743E+02
10.07.20	4.606E+01	5.408E+00	1.047E+01	1.653E+00	2.823E+01	2.244E+01	2.731E+02
10.07.30	4.504E+01	7.529E+00	1.018E+01	1.916E+00	2.830E+01	2.236E+01	2.713E+02
10.07.40	4.623E+01	8.195E+00	9.687E+00	2.225E+00	2.837E+01	2.232E+01	2.719E+02
10.07.50	4.735E+01	6.947E+00	9.522E+00	2.173E+00	2.852E+01	2.220E+01	2.743E+02
10.08.00	4.877E+01	6.780E+00	1.018E+01	1.973E+00	2.868E+01	2.212E+01	2.731E+02
10.08.10	4.992E+01	6.406E+00	9.025E+00	1.697E+00	2.847E+01	2.228E+01	2.731E+02
10.08.20	4.778E+01	8.611E+00	8.114E+00	1.719E+00	2.861E+01	2.216E+01	2.731E+02
10.08.30	5.098E+01	6.988E+00	8.280E+00	1.883E+00	2.881E+01	2.196E+01	2.707E+02
10.08.40	5.369E+01	5.782E+00	9.356E+00	1.760E+00	2.881E+01	2.192E+01	2.713E+02
10.08.50	5.167E+01	7.404E+00	8.238E+00	1.704E+00	2.860E+01	2.220E+01	2.725E+02
10.09.00	5.184E+01	7.238E+00	9.273E+00	1.818E+00	2.847E+01	2.228E+01	2.725E+02
10.09.10	4.959E+01	7.820E+00	9.025E+00	1.805E+00	2.845E+01	2.220E+01	2.743E+02
10.09.20	5.062E+01	9.609E+00	8.652E+00	1.876E+00	2.865E+01	2.200E+01	2.737E+02
10.09.30	5.085E+01	9.692E+00	9.190E+00	1.840E+00	2.869E+01	2.200E+01	2.743E+02

APPENDIX B

TABLE B7.- Continued

(d) Leg B → A

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
10.12.10	4.738E+01	5.782E+00	7.286E+00	2.155E+00	2.822E+01	2.236E+01	2.701E+02
10.12.20	4.761E+01	6.947E+00	8.694E+00	1.872E+00	2.812E+01	2.232E+01	2.768E+02
10.12.30	4.659E+01	7.488E+00	9.770E+00	1.737E+00	2.825E+01	2.220E+01	2.774E+02
10.12.40	4.920E+01	7.904E+00	1.039E+01	1.757E+00	2.820E+01	2.220E+01	2.756E+02
10.12.50	4.788E+01	7.113E+00	9.729E+00	2.031E+00	2.813E+01	2.224E+01	2.786E+02
10.13.00	4.712E+01	7.196E+00	8.528E+00	2.124E+00	2.831E+01	2.220E+01	2.749E+02
10.13.10	4.999E+01	7.404E+00	9.646E+00	1.901E+00	2.837E+01	2.216E+01	2.743E+02
10.13.20	4.950E+01	7.113E+00	9.687E+00	1.717E+00	2.815E+01	2.224E+01	2.743E+02
10.13.30	4.771E+01	8.320E+00	9.480E+00	1.804E+00	2.795E+01	2.240E+01	2.731E+02
10.13.40	4.511E+01	7.404E+00	8.362E+00	1.835E+00	2.809E+01	2.188E+01	2.725E+02
10.13.50	4.540E+01	8.569E+00	9.522E+00	2.040E+00	2.806E+01	2.224E+01	2.743E+02
10.14.00	4.702E+01	8.236E+00	9.977E+00	2.199E+00	2.779E+01	2.236E+01	2.756E+02
10.14.10	4.290E+01	6.115E+00	1.006E+01	2.052E+00	2.808E+01	2.224E+01	2.762E+02
10.14.20	4.639E+01	7.654E+00	9.853E+00	1.812E+00	2.833E+01	2.208E+01	2.737E+02
10.14.30	4.745E+01	7.612E+00	1.030E+01	1.715E+00	2.816E+01	2.224E+01	2.719E+02
10.14.40	4.580E+01	7.529E+00	1.121E+01	1.841E+00	2.829E+01	2.208E+01	2.756E+02
10.14.50	4.662E+01	8.944E+00	1.043E+01	2.095E+00	2.837E+01	2.204E+01	2.749E+02
10.15.00	4.867E+01	8.611E+00	9.770E+00	1.881E+00	2.803E+01	2.224E+01	2.743E+02
10.15.10	4.415E+01	5.657E+00	1.059E+01	1.755E+00	2.814E+01	2.220E+01	2.737E+02
10.15.20	4.603E+01	4.992E+00	9.977E+00	1.691E+00	2.821E+01	2.216E+01	2.737E+02
10.15.30	4.583E+01	5.657E+00	9.936E+00		2.858E+01	2.196E+01	2.725E+02
10.15.40	5.167E+01	7.488E+00	8.652E+00		2.871E+01	2.196E+01	2.756E+02
10.15.50	5.082E+01	7.072E+00	7.534E+00		2.862E+01	2.208E+01	2.743E+02
10.16.00	4.986E+01	8.694E+00	7.038E+00		2.871E+01	2.208E+01	2.725E+02
10.16.10	5.167E+01	8.444E+00	7.617E+00		2.867E+01	2.212E+01	2.725E+02
10.16.20	4.903E+01	7.488E+00	7.079E+00		2.851E+01	2.216E+01	2.725E+02
10.16.30	4.844E+01	6.614E+00	7.452E+00	1.753E+00	2.834E+01	2.224E+01	2.725E+02
10.16.40	4.534E+01	6.822E+00	6.210E+00	1.714E+00	2.858E+01	2.212E+01	2.719E+02
10.16.50	5.187E+01	7.113E+00	5.506E+00	2.035E+00	2.870E+01	2.132E+01	2.707E+02
10.17.00	5.223E+01	7.571E+00	6.127E+00	1.960E+00	2.827E+01	2.220E+01	2.749E+02
10.17.10	4.758E+01	6.323E+00	8.818E+00	1.744E+00	2.830E+01	2.184E+01	2.725E+02
10.17.20	4.682E+01	7.696E+00	1.076E+01	1.780E+00	2.840E+01	2.164E+01	2.719E+02
10.17.30	4.656E+01	5.990E+00	9.190E+00	2.021E+00	2.839E+01	2.208E+01	2.731E+02
10.17.40	4.860E+01	6.864E+00	9.066E+00	1.934E+00	2.817E+01	2.212E+01	2.737E+02
10.17.50	4.540E+01	5.408E+00	7.534E+00	1.688E+00	2.822E+01	2.212E+01	2.719E+02
10.18.00	4.448E+01	7.945E+00	7.824E+00	1.566E+00	2.813E+01	2.108E+01	2.756E+02
10.18.10	4.464E+01	7.612E+00	9.397E+00		2.813E+01	1.732E+01	2.780E+02
10.18.20	4.583E+01	7.155E+00	1.088E+01		2.828E+01	2.208E+01	2.737E+02
10.18.30	4.550E+01	7.155E+00	8.735E+00		2.828E+01	2.200E+01	2.725E+02
10.18.40	4.656E+01	8.569E+00	8.901E+00	1.962E+00	2.823E+01	2.200E+01	2.743E+02
10.18.50	4.580E+01	8.403E+00	1.035E+01	2.061E+00	2.834E+01	2.192E+01	2.731E+02
10.19.00	4.554E+01	6.614E+00	1.163E+01	1.884E+00	2.846E+01	2.188E+01	2.749E+02
10.19.10	4.686E+01	6.198E+00	1.142E+01	1.660E+00	2.858E+01	2.184E+01	2.743E+02
10.19.20	4.910E+01	6.988E+00	1.146E+01	1.684E+00	2.860E+01	2.184E+01	2.725E+02
10.19.30	4.745E+01	7.155E+00	1.146E+01	1.952E+00	2.868E+01	2.180E+01	2.719E+02
10.19.40	4.752E+01	7.155E+00	1.155E+01	2.036E+00	2.871E+01	2.176E+01	2.725E+02
10.19.50	4.956E+01	8.112E+00	1.150E+01	1.900E+00	2.867E+01	2.176E+01	2.737E+02
10.20.00	4.821E+01	6.822E+00	9.604E+00	1.743E+00	2.856E+01	2.176E+01	2.804E+02
10.20.10	4.940E+01	6.489E+00	9.356E+00	2.073E+00	2.868E+01	2.160E+01	2.878E+02
10.20.20	5.207E+01	6.364E+00	9.936E+00	1.903E+00	2.872E+01	2.156E+01	2.933E+02
10.20.30	5.418E+01	7.363E+00	8.694E+00	1.915E+00	2.877E+01	2.152E+01	2.994E+02
10.20.40	5.326E+01	8.028E+00	8.238E+00	2.024E+00	2.875E+01	2.144E+01	3.141E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B7.- Continued

(e) Spiral at A

zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
10.20.40	5.326E+01	8.028E+00	8.238E+00	2.024E+00	2.875E+01	2.144E+01	3.141E+02
10.20.50	5.263E+01	7.155E+00	9.149E+00	1.812E+00	2.847E+01	1.996E+01	3.581E+02
10.21.00	5.725E+01	6.073E+00	8.983E+00	1.904E+00	2.841E+01	2.084E+01	3.849E+02
10.21.10	5.907E+01	7.113E+00	7.327E+00	2.159E+00	2.848E+01	2.108E+01	4.088E+02
10.21.20	6.355E+01	7.779E+00	7.824E+00	2.011E+00	2.862E+01	2.080E+01	4.308E+02
10.21.30	6.722E+01	8.028E+00	7.907E+00	1.898E+00	2.868E+01	2.056E+01	4.503E+02
10.21.40	6.956E+01	8.569E+00	6.292E+00	1.868E+00	2.851E+01	2.044E+01	4.803E+02
10.21.50	6.946E+01	8.112E+00	6.334E+00	1.915E+00	2.846E+01	2.020E+01	5.096E+02
10.22.00	7.194E+01	6.115E+00	8.238E+00	1.873E+00	2.832E+01	2.000E+01	5.359E+02
10.22.10	7.302E+01	6.364E+00	8.487E+00	1.852E+00	2.809E+01	2.000E+01	5.603E+02
10.22.20	7.438E+01	6.489E+00	8.073E+00	1.848E+00	2.790E+01	1.992E+01	5.854E+02
10.22.30	7.444E+01	7.571E+00	8.031E+00	1.889E+00	2.774E+01	1.976E+01	6.098E+02
10.22.40	7.471E+01	7.280E+00	7.700E+00	1.873E+00	2.759E+01	1.960E+01	6.349E+02
10.22.50	7.458E+01	7.696E+00	6.582E+00	1.822E+00	2.749E+01	1.964E+01	6.575E+02
10.23.00	7.603E+01	7.446E+00	7.866E+00	1.861E+00	2.728E+01	1.968E+01	6.819E+02
10.23.10	7.467E+01	8.112E+00	8.652E+00	1.917E+00	2.710E+01	1.976E+01	7.070E+02
10.23.20	7.461E+01	8.320E+00	7.866E+00	1.910E+00	2.705E+01	1.972E+01	7.296E+02
10.23.30	7.962E+01	6.864E+00	7.617E+00	1.957E+00	2.703E+01	1.936E+01	7.522E+02
10.23.40	7.722E+01	5.574E+00	6.375E+00	1.962E+00	2.704E+01	1.876E+01	7.760E+02
10.23.50	7.563E+01	4.700E+00	5.920E+00	1.986E+00	2.693E+01	1.808E+01	8.005E+02
10.24.00	7.593E+01	7.488E+00	6.292E+00	2.017E+00	2.681E+01	1.748E+01	8.261E+02
10.24.10	7.642E+01	5.408E+00	6.499E+00	1.938E+00	2.679E+01	1.696E+01	8.500E+02
10.24.20	7.708E+01	6.156E+00	6.665E+00	1.835E+00	2.656E+01	1.800E+01	8.738E+02
10.24.30	7.695E+01	5.824E+00	5.216E+00	1.921E+00	2.633E+01	1.844E+01	8.970E+02
10.24.40	7.339E+01	6.323E+00	4.388E+00	1.985E+00	2.612E+01	1.860E+01	9.209E+02
10.24.50	6.910E+01	6.864E+00	6.458E+00	1.900E+00	2.592E+01	1.848E+01	9.453E+02
10.25.00	7.170E+01	8.320E+00	6.582E+00	1.985E+00	2.575E+01	1.828E+01	9.704E+02
10.25.10	6.903E+01	6.448E+00	6.334E+00	1.956E+00	2.558E+01	1.796E+01	9.942E+02
10.25.20	6.761E+01	6.822E+00	5.671E+00	1.937E+00	2.546E+01	1.744E+01	1.019E+03
10.25.30	6.530E+01	6.697E+00	6.127E+00	2.063E+00	2.526E+01	1.732E+01	1.044E+03
10.25.40	6.722E+01	6.032E+00	6.334E+00	2.020E+00	2.510E+01	1.692E+01	1.071E+03
10.25.50	6.415E+01	4.700E+00	6.955E+00	2.019E+00	2.496E+01	1.652E+01	1.099E+03
10.26.00	6.477E+01	6.115E+00	7.079E+00	1.937E+00	2.478E+01	1.636E+01	1.126E+03
10.26.10	6.266E+01	5.616E+00	6.085E+00	1.942E+00	2.457E+01	1.636E+01	1.153E+03
10.26.20	6.177E+01	5.907E+00	5.547E+00	2.018E+00	2.433E+01	1.624E+01	1.180E+03
10.26.30	6.157E+01	7.072E+00	6.624E+00	2.090E+00	2.414E+01	1.620E+01	1.201E+03

APPENDIX B

TABLE B7.- Continued

(f) Leg G → H

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
10.37.30	5.867E+01	7.155E+00	6.458E+00	1.735E+00	3.014E+01	2.044E+01	2.939E+02
10.37.40	5.801E+01	6.947E+00	6.417E+00	2.047E+00	3.016E+01	2.052E+01	2.780E+02
10.37.50	5.864E+01	7.779E+00	6.251E+00	2.125E+00	2.998E+01	2.100E+01	2.621E+02
10.38.00	5.659E+01	7.238E+00	6.003E+00	1.921E+00	2.961E+01	2.144E+01	2.597E+02
10.38.10	5.517E+01	5.283E+00	6.168E+00	1.852E+00	2.979E+01	2.104E+01	2.658E+02
10.38.20	5.702E+01	7.945E+00	6.375E+00	1.917E+00	2.963E+01	2.120E+01	2.639E+02
10.38.30	5.629E+01	7.113E+00	5.547E+00	1.907E+00	2.969E+01	2.112E+01	2.646E+02
10.38.40	5.775E+01	7.987E+00	6.251E+00	1.826E+00	2.944E+01	2.132E+01	2.664E+02
10.38.50	5.504E+01	8.819E+00	7.576E+00	1.943E+00	2.923E+01	2.156E+01	2.664E+02
10.39.00	5.398E+01	8.611E+00	7.866E+00	1.873E+00	2.931E+01	2.128E+01	2.652E+02
10.39.10	5.487E+01	9.027E+00	7.410E+00	1.868E+00	2.923E+01	2.132E+01	2.688E+02
10.39.20	5.461E+01	6.864E+00	7.493E+00		2.924E+01	2.144E+01	2.676E+02
10.39.30	5.425E+01	6.448E+00	8.362E+00	1.901E+00	2.901E+01	2.176E+01	2.664E+02
10.39.40	5.161E+01	7.696E+00	7.576E+00	1.760E+00	2.895E+01	2.180E+01	2.664E+02
10.39.50	5.303E+01	7.196E+00	8.487E+00	1.887E+00	2.903E+01	2.172E+01	2.646E+02
10.40.00	5.336E+01	9.776E+00	7.824E+00	1.861E+00	2.909E+01	2.164E+01	2.676E+02
10.40.10	5.464E+01	7.779E+00	7.079E+00	1.884E+00	2.914E+01	2.172E+01	2.652E+02
10.40.20	5.161E+01	7.904E+00	8.238E+00	1.887E+00	2.918E+01	2.168E+01	2.658E+02
10.40.30	5.405E+01	8.611E+00	7.410E+00	1.925E+00	2.925E+01	2.164E+01	2.658E+02
10.40.40	4.920E+01	6.905E+00	7.369E+00	1.916E+00	2.935E+01	2.160E+01	2.658E+02
10.40.50	5.055E+01	8.611E+00	9.232E+00	1.942E+00	2.945E+01	2.152E+01	2.646E+02
10.41.00	5.649E+01	1.048E+01	1.519E+01	1.841E+00	2.833E+01	2.392E+01	3.654E+02
10.41.10	5.105E+01	6.656E+00	1.242E+01	1.874E+00	2.942E+01	2.152E+01	2.658E+02
10.41.20	5.332E+01	6.822E+00	1.109E+01	1.900E+00	2.933E+01	2.152E+01	2.658E+02
10.41.30	5.128E+01	7.113E+00	1.035E+01	1.715E+00	2.917E+01	2.156E+01	2.664E+02
10.41.40	5.128E+01	9.193E+00	1.010E+01	1.891E+00	2.906E+01	2.168E+01	2.658E+02
10.41.50	5.260E+01	7.696E+00	1.088E+01	1.924E+00	2.890E+01	2.136E+01	2.670E+02
10.42.00	5.082E+01	7.321E+00	8.818E+00		2.879E+01	2.100E+01	2.670E+02
10.42.10	4.877E+01	8.403E+00	7.659E+00		2.876E+01	2.192E+01	2.664E+02
10.42.20	5.002E+01	7.404E+00	5.382E+00	1.931E+00	2.861E+01	2.200E+01	2.658E+02
10.42.30	5.045E+01	5.408E+00	6.127E+00	2.018E+00	2.849E+01	2.212E+01	2.664E+02
10.42.40	5.118E+01	5.990E+00	7.700E+00	1.937E+00	2.846E+01	2.216E+01	2.646E+02
10.42.50	4.867E+01	6.822E+00	7.741E+00	1.972E+00	2.845E+01	2.216E+01	2.646E+02
10.43.00	4.646E+01	9.110E+00	6.996E+00	1.997E+00	2.839E+01	2.224E+01	2.633E+02
10.43.10	4.422E+01	7.030E+00	8.528E+00	1.972E+00	2.811E+01	2.240E+01	2.615E+02

*Data gaps due to instrument calibration or zero drift.

Pages 111 through 126 intentionally left blank.

APPENDIX B

TABLE B7.- Continued

(w) Spiral at A

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
16.29.20	9.500E+01	1.214E+01	2.293E+01		2.879E+01	2.040E+01	2.768E+02
16.29.30	8.903E+01	1.389E+01	2.591E+01		2.843E+01	2.032E+01	3.073E+02
16.29.40	8.088E+01	1.510E+01	3.018E+01		2.821E+01	1.940E+01	3.348E+02
16.29.50	6.359E+01	2.017E+01	3.817E+01		2.793E+01	1.928E+01	3.648E+02
16.30.00	7.180E+01	1.872E+01	4.450E+01	2.003E+00	2.776E+01	1.836E+01	3.904E+02
16.30.10	9.890E+01	1.189E+01	3.639E+01	1.897E+00	2.741E+01	1.808E+01	4.259E+02
16.30.20	9.929E+01	8.777E+00	2.649E+01	1.607E+00	2.701E+01	1.904E+01	4.528E+02
16.30.30	1.055E+02	7.612E+00	2.248E+01	1.745E+00	2.674E+01	1.956E+01	4.778E+02
16.30.40	1.091E+02	9.235E+00	1.834E+01	1.979E+00	2.680E+01	1.748E+01	4.992E+02
16.30.50	9.124E+01	1.114E+01	1.631E+01	1.904E+00	2.659E+01	1.676E+01	5.261E+02
16.31.00	8.580E+01	9.776E+00	1.270E+01	1.901E+00	2.655E+01	1.552E+01	5.512E+02
16.31.10	8.200E+01	8.860E+00	1.092E+01	1.797E+00	2.659E+01	1.540E+01	5.835E+02
16.31.20	7.982E+01	9.692E+00	1.080E+01	1.749E+00	2.640E+01	1.564E+01	6.086E+02
16.31.30	8.131E+01	8.153E+00	9.687E+00	1.674E+00	2.609E+01	1.556E+01	6.330E+02
16.31.40	7.929E+01	5.740E+00	8.569E+00	1.709E+00	2.574E+01	1.516E+01	6.703E+02
16.31.50	7.989E+01	7.987E+00	7.452E+00	1.777E+00	2.573E+01	1.520E+01	6.997E+02
16.32.00	7.850E+01	9.984E+00	7.741E+00	1.784E+00	2.568E+01	1.532E+01	7.210E+02
16.32.10	7.599E+01	8.944E+00	7.824E+00	1.951E+00	2.549E+01	1.528E+01	7.424E+02
16.32.20	7.758E+01	9.443E+00	7.617E+00	1.896E+00	2.533E+01	1.540E+01	7.681E+02
16.32.30	7.481E+01	1.006E+01	7.162E+00	1.853E+00	2.509E+01	1.536E+01	7.938E+02
16.32.40	7.599E+01	8.777E+00	7.741E+00	1.753E+00	2.486E+01	1.532E+01	8.200E+02
16.32.50	7.283E+01	9.235E+00	7.327E+00	1.828E+00	2.464E+01	1.532E+01	8.463E+02
16.33.00	7.411E+01	8.112E+00	6.582E+00		2.445E+01	1.548E+01	8.738E+02
16.33.10	7.533E+01	9.692E+00	9.273E+00		2.430E+01	1.588E+01	9.025E+02
16.33.20	7.382E+01	8.153E+00	9.190E+00		2.414E+01	1.620E+01	9.313E+02
16.33.30	7.527E+01	1.135E+01	7.369E+00		2.405E+01	1.644E+01	9.563E+02
16.33.40	7.491E+01	1.044E+01	7.659E+00		2.394E+01	1.752E+01	9.887E+02
16.33.50	7.563E+01	9.443E+00	7.741E+00	2.135E+00	2.398E+01	1.828E+01	1.018E+03
16.34.00	7.078E+01	9.734E+00	7.534E+00	2.210E+00	2.433E+01	1.752E+01	1.042E+03
16.34.10	6.151E+01	9.235E+00	7.493E+00	2.190E+00	2.425E+01	1.696E+01	1.071E+03
16.34.20	5.633E+01	8.195E+00	6.872E+00	2.146E+00	2.406E+01	1.672E+01	1.101E+03
16.34.30	5.590E+01	9.984E+00	7.659E+00	2.139E+00	2.385E+01	1.656E+01	1.134E+03
16.34.40	5.507E+01	9.651E+00	7.948E+00	2.111E+00	2.351E+01	1.648E+01	1.166E+03
16.34.50	5.398E+01	1.031E+01	7.576E+00	2.143E+00	2.328E+01	1.648E+01	1.195E+03
16.35.00	5.454E+01	7.945E+00	7.493E+00	3.550E+00	2.359E+01	1.652E+01	1.180E+03

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B7.- Continued

(x) Leg G → H

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.19.20	9.662E+01	9.942E+00	7.162E+00	1.800E+00	2.669E+01	1.944E+01	2.749E+02
18.19.30	9.956E+01	9.776E+00	8.238E+00	1.791E+00	2.668E+01	1.952E+01	2.756E+02
18.19.40	9.867E+01	1.002E+01	7.907E+00	1.945E+00	2.674E+01	1.984E+01	2.737E+02
18.19.50	1.015E+02	9.859E+00	7.452E+00	1.938E+00	2.680E+01	1.980E+01	2.731E+02
18.20.00	1.025E+02	9.692E+00	7.617E+00	1.888E+00	2.681E+01	1.980E+01	2.688E+02
18.20.10	9.909E+01	1.010E+01	8.073E+00	1.861E+00	2.679E+01	1.976E+01	2.701E+02
18.20.20	9.979E+01	9.692E+00	8.569E+00	1.866E+00	2.675E+01	1.960E+01	2.701E+02
18.20.30	9.916E+01	9.900E+00	7.990E+00	2.088E+00	2.676E+01	1.980E+01	2.701E+02
18.20.40	9.801E+01	8.153E+00	8.652E+00	2.013E+00	2.676E+01	2.004E+01	2.701E+02
18.20.50	9.966E+01	9.027E+00	8.983E+00	1.889E+00	2.672E+01	1.980E+01	2.707E+02
18.21.00	9.837E+01	9.276E+00	8.983E+00		2.671E+01	1.900E+01	2.713E+02
18.21.10	9.520E+01	6.531E+00	1.001E+01		2.668E+01	1.820E+01	2.719E+02
18.21.20	9.342E+01	8.944E+00	7.617E+00		2.666E+01	1.888E+01	2.719E+02
18.21.30	9.223E+01	1.044E+01	7.576E+00	1.880E+00	2.653E+01	1.876E+01	2.713E+02
18.21.40	9.249E+01	1.198E+01	7.245E+00	1.852E+00	2.655E+01	1.880E+01	2.694E+02
18.21.50	9.253E+01	1.168E+01	6.996E+00	1.805E+00	2.644E+01	1.896E+01	2.707E+02
18.22.00	9.322E+01	9.609E+00	7.617E+00	1.847E+00	2.647E+01	1.912E+01	2.707E+02
18.22.10	9.286E+01	9.110E+00	7.203E+00	1.654E+00	2.649E+01	1.852E+01	2.719E+02
18.22.20	9.355E+01	8.694E+00	6.417E+00	1.616E+00	2.650E+01	1.804E+01	2.725E+02
18.22.30	9.147E+01	7.488E+00	7.079E+00	1.692E+00	2.641E+01	1.828E+01	2.719E+02
18.22.40	9.286E+01	1.040E+01	8.114E+00		2.635E+01	1.744E+01	2.731E+02
18.22.50	9.121E+01	1.031E+01	8.487E+00		2.640E+01	1.736E+01	2.725E+02
18.23.00	9.131E+01	1.089E+01	7.741E+00		2.645E+01	1.840E+01	2.694E+02
18.23.10	9.141E+01	1.019E+01	7.286E+00	1.944E+00	2.634E+01	1.872E+01	2.731E+02
18.23.20	9.329E+01	7.696E+00	7.162E+00	1.818E+00	2.626E+01	1.904E+01	2.713E+02
18.23.30	9.556E+01	1.010E+01	6.624E+00	1.911E+00	2.622E+01	1.924E+01	2.725E+02
18.23.40	9.319E+01	9.027E+00	6.706E+00	1.813E+00	2.631E+01	1.912E+01	2.719E+02
18.23.50	9.292E+01	9.110E+00	6.334E+00	1.809E+00	2.629E+01	1.908E+01	2.731E+02
18.24.00	9.576E+01	1.044E+01	7.162E+00	1.853E+00	2.629E+01	1.912E+01	2.719E+02
18.24.10	9.342E+01	1.048E+01	7.079E+00	1.802E+00	2.625E+01	1.908E+01	2.731E+02
18.24.20	9.200E+01	8.444E+00	7.700E+00	1.801E+00	2.631E+01	1.908E+01	2.725E+02
18.24.30	9.395E+01	8.569E+00	8.155E+00	1.934E+00	2.640E+01	1.920E+01	2.725E+02
18.24.40	9.375E+01	1.006E+01	6.955E+00	1.956E+00	2.642E+01	1.924E+01	2.713E+02
18.24.50	9.708E+01	1.027E+01	7.369E+00	1.860E+00	2.640E+01	1.940E+01	2.743E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B7.- Continued

(y) Leg F → E

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.29.10	9.279E+01	8.902E+00	7.162E+00		2.623E+01	2.152E+01	2.737E+02
18.29.20	9.345E+01	9.193E+00	7.452E+00		2.630E+01	2.120E+01	2.731E+02
18.29.30	9.362E+01	8.736E+00	8.280E+00		2.636E+01	2.112E+01	2.725E+02
18.29.40	9.309E+01	8.361E+00	7.741E+00		2.639E+01	2.080E+01	2.786E+02
18.29.50	9.055E+01	6.406E+00	8.487E+00		2.644E+01	2.008E+01	2.780E+02
18.30.00	9.282E+01	9.734E+00	7.038E+00		2.638E+01	2.092E+01	2.774E+02
18.30.10	9.190E+01	9.401E+00	7.783E+00		2.639E+01	2.116E+01	2.707E+02
18.30.20	9.183E+01	9.068E+00	8.901E+00		2.630E+01	2.140E+01	2.719E+02
18.30.30	8.926E+01	8.819E+00	8.694E+00		2.620E+01	2.156E+01	2.725E+02
18.30.40	9.240E+01	9.984E+00	7.162E+00		2.607E+01	2.168E+01	2.713E+02
18.30.50	9.438E+01	9.110E+00	6.955E+00		2.603E+01	2.184E+01	2.719E+02
18.31.00	9.177E+01	8.694E+00	7.203E+00		2.596E+01	2.060E+01	2.774E+02
18.31.10	9.160E+01	8.860E+00	7.327E+00		2.595E+01	1.872E+01	2.804E+02
18.31.20	9.111E+01	9.068E+00	8.528E+00		2.588E+01	2.152E+01	2.774E+02
18.31.30	9.517E+01	1.031E+01	8.404E+00		2.591E+01	2.096E+01	2.749E+02
18.31.40	9.546E+01	1.064E+01	9.025E+00		2.588E+01	1.788E+01	2.847E+02
18.31.50	9.639E+01	8.944E+00	8.735E+00		2.592E+01	1.784E+01	2.829E+02
18.32.00	9.395E+01	9.152E+00	7.990E+00		2.590E+01	1.948E+01	2.780E+02
18.32.10	9.768E+01	1.064E+01	8.321E+00		2.590E+01	2.148E+01	2.756E+02
18.32.20	9.728E+01	1.210E+01	8.155E+00		2.589E+01	2.200E+01	2.762E+02
18.32.30	9.820E+01	1.218E+01	7.327E+00		2.591E+01	2.196E+01	2.743E+02
18.32.40	9.672E+01	8.361E+00	6.624E+00		2.596E+01	2.184E+01	2.749E+02
18.32.50	9.725E+01	8.736E+00	6.003E+00		2.599E+01	2.184E+01	2.749E+02
18.33.00	9.903E+01	7.820E+00	6.210E+00		2.603E+01	2.176E+01	2.737E+02
18.33.10	1.007E+02	8.819E+00	6.210E+00		2.611E+01	2.140E+01	2.731E+02
18.33.20	1.031E+02	9.193E+00	7.534E+00		2.622E+01	2.168E+01	2.731E+02
18.33.30	1.018E+02	1.006E+01	7.162E+00		2.652E+01	2.132E+01	2.743E+02
18.33.40	1.018E+02	1.044E+01	8.280E+00		2.668E+01	2.132E+01	2.731E+02
18.33.50	1.032E+02	9.651E+00	9.397E+00		2.681E+01	2.120E+01	2.725E+02
18.34.00	1.022E+02	9.235E+00	8.445E+00		2.689E+01	2.104E+01	2.731E+02
18.34.10	1.022E+02	9.152E+00	7.948E+00		2.704E+01	2.124E+01	2.749E+02
18.34.20	1.020E+02	9.651E+00	8.197E+00		2.711E+01	2.108E+01	2.731E+02
18.34.30	1.018E+02	1.110E+01	1.126E+01		2.714E+01	2.040E+01	2.719E+02
18.34.40	1.075E+02	8.528E+00	1.068E+01		2.717E+01	1.940E+01	2.743E+02
18.34.50	1.056E+02	8.320E+00	1.076E+01		2.724E+01	1.972E+01	2.731E+02
18.35.00	1.053E+02	8.361E+00	9.066E+00		2.719E+01	1.984E+01	2.749E+02
18.35.10	1.033E+02	1.094E+01	7.120E+00		2.735E+01	2.124E+01	2.774E+02
18.35.20	1.018E+02	9.734E+00	6.582E+00		2.752E+01	2.104E+01	2.749E+02
18.35.30	1.041E+02	8.569E+00	7.700E+00		2.761E+01	2.124E+01	2.743E+02
18.35.40	1.065E+02	9.776E+00	8.114E+00		2.783E+01	2.128E+01	2.756E+02
18.35.50	1.039E+02	9.942E+00	9.894E+00		2.787E+01	2.164E+01	2.768E+02
18.36.00	1.049E+02	9.900E+00	1.192E+01		2.825E+01	2.104E+01	2.725E+02
18.36.10	1.064E+02	7.820E+00	1.391E+01		2.824E+01	1.996E+01	2.707E+02
18.36.20	1.080E+02	1.002E+01	1.324E+01		2.826E+01	2.020E+01	2.652E+02
18.36.30	1.102E+02	7.654E+00	1.366E+01		2.811E+01	1.944E+01	2.713E+02
18.36.40	1.128E+02	7.737E+00	1.229E+01		2.817E+01	2.096E+01	2.701E+02
18.36.50	1.144E+02	8.902E+00	1.242E+01		2.807E+01	2.092E+01	2.737E+02
18.37.00	1.148E+02	8.403E+00	1.192E+01		2.804E+01	2.108E+01	2.756E+02
18.37.10	1.120E+02	9.110E+00	1.287E+01		2.813E+01	2.136E+01	2.737E+02
18.37.20	1.129E+02	9.942E+00	1.270E+01		2.810E+01	2.120E+01	2.707E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B7.- Continued

(z) Leg C → D

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.40.00	1.042E+02	8.403E+00	1.225E+01		2.778E+01	2.200E+01	2.737E+02
18.40.10	1.038E+02	8.278E+00	1.477E+01		2.769E+01	2.120E+01	2.707E+02
18.40.20	1.068E+02	9.568E+00	1.366E+01		2.764E+01	2.196E+01	2.762E+02
18.40.30	1.060E+02	1.015E+01	1.337E+01		2.776E+01	2.208E+01	2.725E+02
18.40.40	1.017E+02	1.077E+01	1.349E+01	2.186E+00	2.766E+01	2.216E+01	2.786E+02
18.40.50	1.000E+02	1.110E+01	1.324E+01	2.063E+00	2.774E+01	2.192E+01	2.670E+02
18.41.00	1.044E+02	1.102E+01	1.208E+01	2.347E+00	2.769E+01	2.192E+01	2.737E+02
18.41.10	1.015E+02	9.984E+00	1.204E+01	2.482E+00	2.768E+01	2.220E+01	2.780E+02
18.41.20	1.027E+02	1.015E+01	1.163E+01	2.255E+00	2.763E+01	2.212E+01	2.658E+02
18.41.30	1.044E+02	9.984E+00	1.308E+01	1.976E+00	2.746E+01	2.176E+01	2.768E+02
18.41.40	1.038E+02	1.006E+01	1.200E+01	2.274E+00	2.740E+01	2.192E+01	2.743E+02
18.41.50	1.022E+02	9.692E+00	1.213E+01	2.193E+00	2.733E+01	2.208E+01	2.786E+02
18.42.00	1.009E+02	9.526E+00	1.353E+01	2.155E+00	2.720E+01	2.196E+01	2.749E+02
18.42.10	1.008E+02	9.027E+00	1.316E+01	2.285E+00	2.719E+01	2.200E+01	2.762E+02
18.42.20	9.791E+01	8.944E+00	1.225E+01	2.329E+00	2.712E+01	2.188E+01	2.762E+02
18.42.30	9.824E+01	9.942E+00	1.237E+01	2.168E+00	2.713E+01	2.172E+01	2.737E+02
18.42.40	9.381E+01	9.651E+00	1.146E+01		2.703E+01	2.088E+01	2.811E+02
18.42.50	9.771E+01	8.195E+00	9.604E+00		2.708E+01	1.956E+01	2.774E+02
18.43.00	1.011E+02	7.862E+00	9.853E+00		2.693E+01	2.172E+01	2.743E+02
18.43.10	9.982E+01	9.484E+00	8.073E+00		2.689E+01	2.100E+01	2.786E+02
18.43.20	9.058E+01	9.276E+00	7.824E+00		2.684E+01	1.768E+01	2.817E+02
18.43.30	9.550E+01	8.361E+00	9.770E+00		2.676E+01	2.104E+01	2.756E+02
18.43.40	9.612E+01	9.692E+00	1.043E+01	2.070E+00	2.668E+01	2.172E+01	2.768E+02
18.43.50	9.329E+01	9.360E+00	8.528E+00	2.074E+00	2.662E+01	2.168E+01	2.756E+02
18.44.00	9.540E+01	1.010E+01	9.729E+00	2.132E+00	2.660E+01	2.140E+01	2.743E+02
18.44.10	9.497E+01	9.027E+00	1.080E+01	2.020E+00	2.656E+01	2.132E+01	2.762E+02
18.44.20	9.471E+01	1.031E+01	9.025E+00	2.252E+00	2.652E+01	2.156E+01	2.780E+02
18.44.30	9.593E+01	9.110E+00	8.073E+00	2.058E+00	2.660E+01	2.168E+01	2.762E+02
18.44.40	8.919E+01	7.862E+00	8.238E+00	2.336E+00	2.649E+01	2.156E+01	2.768E+02
18.44.50	8.844E+01	7.196E+00	9.563E+00	2.212E+00	2.643E+01	2.152E+01	2.749E+02
18.45.00	9.266E+01	8.070E+00	1.088E+01	2.207E+00	2.653E+01	2.168E+01	2.756E+02
18.45.10	9.094E+01	9.651E+00	9.894E+00	2.238E+00	2.644E+01	2.148E+01	2.731E+02
18.45.20	9.329E+01	9.568E+00	8.818E+00	1.919E+00	2.642E+01	2.176E+01	2.762E+02
18.45.30	9.576E+01	9.318E+00	8.114E+00	2.251E+00	2.642E+01	2.176E+01	2.731E+02
18.45.40	9.593E+01	8.236E+00	7.866E+00	2.497E+00	2.638E+01	2.132E+01	2.749E+02
18.45.50	9.464E+01	7.612E+00	6.996E+00	2.439E+00	2.639E+01	2.120E+01	2.749E+02
18.46.00	9.312E+01	8.777E+00	7.038E+00	2.086E+00	2.645E+01	2.072E+01	2.743E+02
18.46.10	9.632E+01	1.015E+01	7.534E+00	2.252E+00	2.654E+01	2.052E+01	2.731E+02
18.46.20	9.309E+01	9.859E+00	6.582E+00	2.316E+00	2.662E+01	2.024E+01	2.731E+02
18.46.30	9.616E+01	6.780E+00	6.706E+00	1.951E+00	2.672E+01	1.976E+01	2.737E+02
18.46.40	9.223E+01	8.112E+00	8.611E+00	2.148E+00	2.682E+01	1.944E+01	2.743E+02
18.46.50	9.042E+01	9.817E+00	9.646E+00	1.935E+00	2.693E+01	1.916E+01	2.749E+02
18.47.00	8.721E+01	1.056E+01	9.066E+00	2.143E+00	2.715E+01	1.880E+01	2.731E+02
18.47.10	8.827E+01	8.028E+00	7.286E+00	2.110E+00	2.719E+01	1.884E+01	2.762E+02
18.47.20	8.642E+01	8.819E+00	7.079E+00	1.974E+00	2.730E+01	1.924E+01	2.756E+02
18.47.30	9.213E+01	8.070E+00	7.907E+00	2.180E+00	2.741E+01	1.972E+01	2.756E+02
18.47.40	1.016E+02	8.236E+00	7.866E+00	1.945E+00	2.769E+01	1.884E+01	2.780E+02
18.47.50	9.791E+01	8.736E+00	8.073E+00	2.242E+00	2.779E+01	1.944E+01	2.743E+02
18.48.00	1.039E+02	7.696E+00	9.894E+00	1.937E+00	2.792E+01	1.744E+01	2.731E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B7.- Continued

(aa) Leg B → A

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.50.10	8.771E+01	8.694E+00	9.273E+00		2.799E+01	1.940E+01	2.768E+02
18.50.20	8.665E+01	6.822E+00	1.014E+01	2.083E+00	2.796E+01	2.000E+01	2.786E+02
18.50.30	9.038E+01	8.736E+00	1.035E+01	2.031E+00	2.800E+01	1.964E+01	2.804E+02
18.50.40	9.032E+01	1.027E+01	1.068E+01	1.938E+00	2.814E+01	1.956E+01	2.713E+02
18.50.50	9.150E+01	1.164E+01	1.084E+01	2.137E+00	2.804E+01	1.972E+01	2.749E+02
18.51.00	9.507E+01	1.035E+01	1.138E+01	2.156E+00	2.777E+01	2.028E+01	2.743E+02
18.51.10	9.362E+01	7.529E+00	1.163E+01	1.944E+00	2.788E+01	2.020E+01	2.737E+02
18.51.20	9.847E+01	6.489E+00	1.080E+01	1.924E+00	2.797E+01	1.872E+01	2.731E+02
18.51.30	1.017E+02	7.529E+00	8.776E+00		2.783E+01	1.996E+01	2.707E+02
18.51.40	1.032E+02	1.048E+01	6.913E+00		2.765E+01	2.036E+01	2.713E+02
18.51.50	1.011E+02	9.692E+00	7.203E+00	2.214E+00	2.749E+01	2.052E+01	2.743E+02
18.52.00	1.031E+02	9.443E+00	7.410E+00	2.306E+00	2.746E+01	2.080E+01	2.756E+02
18.52.10	1.033E+02	1.185E+01	7.038E+00	2.150E+00	2.735E+01	2.088E+01	2.743E+02
18.52.20	1.007E+02	1.052E+01	8.404E+00	2.337E+00	2.734E+01	2.096E+01	2.743E+02
18.52.30	1.006E+02	1.198E+01	8.238E+00	2.163E+00	2.733E+01	2.092E+01	2.737E+02
18.52.40	1.036E+02	1.110E+01	8.528E+00	2.384E+00	2.732E+01	2.068E+01	2.762E+02
18.52.50	1.035E+02	1.048E+01	9.273E+00	2.139E+00	2.738E+01	2.032E+01	2.749E+02
18.53.00	1.019E+02	9.900E+00	1.010E+01	2.205E+00	2.755E+01	1.880E+01	2.749E+02
18.53.10	9.952E+01	8.860E+00	9.315E+00	2.045E+00	2.746E+01	1.900E+01	2.749E+02
18.53.20	9.065E+01	9.526E+00	7.534E+00	2.091E+00	2.742E+01	1.912E+01	2.731E+02
18.53.30	9.348E+01	8.444E+00	9.066E+00	2.103E+00	2.721E+01	2.072E+01	2.749E+02
18.53.40	9.362E+01	9.609E+00	1.047E+01	2.093E+00	2.704E+01	2.096E+01	2.731E+02
18.53.50	9.180E+01	9.734E+00	1.059E+01	1.949E+00	2.715E+01	2.100E+01	2.743E+02
18.54.00	9.688E+01	8.611E+00	1.155E+01	2.244E+00	2.712E+01	2.076E+01	2.731E+02
18.54.10	9.939E+01	9.235E+00	1.080E+01	2.065E+00	2.722E+01	2.012E+01	2.768E+02
18.54.20	1.034E+02	9.526E+00	9.853E+00	2.316E+00	2.727E+01	2.076E+01	2.756E+02
18.54.30	1.081E+02	8.652E+00	9.811E+00	2.201E+00	2.729E+01	2.096E+01	2.749E+02
18.54.40	1.065E+02	8.777E+00	7.576E+00	2.210E+00	2.720E+01	2.128E+01	2.768E+02
18.54.50	1.048E+02	8.652E+00	8.569E+00	2.275E+00	2.710E+01	2.132E+01	2.756E+02
18.55.00	9.814E+01	8.153E+00	1.014E+01	2.299E+00	2.720E+01	2.132E+01	2.774E+02
18.55.10	1.026E+02	9.360E+00	1.039E+01	2.259E+00	2.737E+01	2.128E+01	2.749E+02
18.55.20	1.003E+02	8.486E+00	1.088E+01	2.286E+00	2.735E+01	2.132E+01	2.786E+02
18.55.30	1.023E+02	9.984E+00	1.175E+01	2.192E+00	2.748E+01	2.136E+01	2.829E+02
18.55.40	9.669E+01	9.276E+00	1.184E+01	2.213E+00	2.766E+01	2.148E+01	2.780E+02
18.55.50	9.999E+01	1.152E+01	1.217E+01	2.153E+00	2.794E+01	2.128E+01	2.731E+02
18.56.00	1.014E+02	9.651E+00	1.208E+01	2.144E+00	2.801E+01	2.104E+01	2.725E+02
18.56.10	1.052E+02	8.569E+00	1.121E+01	2.232E+00	2.797E+01	2.104E+01	2.743E+02
18.56.20	1.090E+02	8.902E+00	1.006E+01	2.441E+00	2.790E+01	2.124E+01	2.756E+02
18.56.30	1.100E+02	1.064E+01	1.105E+01	2.405E+00	2.787E+01	2.136E+01	2.768E+02
18.56.40	1.084E+02	9.110E+00	1.291E+01	2.335E+00	2.788E+01	2.144E+01	2.811E+02
18.56.50	1.062E+02	7.987E+00	1.287E+01	2.267E+00	2.804E+01	2.116E+01	2.725E+02
18.57.00	1.133E+02	9.859E+00	1.266E+01	2.207E+00	2.806E+01	2.100E+01	2.756E+02
18.57.10	1.121E+02	1.002E+01	1.225E+01	2.258E+00	2.803E+01	2.136E+01	2.762E+02
18.57.20	1.097E+02	1.069E+01	1.357E+01	2.184E+00	2.806E+01	2.104E+01	2.762E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B7.- Continued

(bb) Spiral at A

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.57.20	1.097E+02	1.069E+01	1.357E+01		2.806E+01	2.104E+01	2.762E+02
18.57.30	1.078E+02	5.574E+00	1.879E+01		2.806E+01	1.960E+01	2.780E+02
18.57.40	1.119E+02	6.281E+00	1.978E+01		2.798E+01	1.956E+01	2.762E+02
18.57.50	1.111E+02	9.068E+00	1.618E+01		2.777E+01	2.128E+01	3.043E+02
18.58.00	1.116E+02	8.694E+00	1.610E+01		2.747E+01	2.108E+01	3.403E+02
18.58.10	1.113E+02	1.069E+01	1.486E+01		2.710E+01	2.128E+01	3.752E+02
18.58.20	1.115E+02	1.006E+01	1.531E+01		2.694E+01	2.096E+01	4.069E+02
18.58.30	1.023E+02	1.060E+01	1.726E+01		2.685E+01	2.068E+01	4.405E+02
18.58.40	1.023E+02	1.160E+01	2.161E+01		2.640E+01	2.096E+01	4.723E+02
18.58.50	9.329E+01	1.102E+01	2.608E+01		2.634E+01	1.988E+01	5.096E+02
18.59.00	9.718E+01	1.310E+01	2.695E+01		2.610E+01	1.976E+01	5.444E+02
18.59.10	1.085E+02	1.639E+01	2.827E+01		2.554E+01	2.388E+01	5.750E+02
18.59.20	1.065E+02	5.283E+00	1.722E+01		2.584E+01	1.752E+01	6.141E+02
18.59.30	9.847E+01	7.529E+00	1.328E+01		2.535E+01	1.824E+01	6.520E+02
18.59.40	1.040E+02	7.072E+00	1.080E+01		2.515E+01	1.708E+01	6.868E+02
18.59.50	9.405E+01	7.113E+00	1.134E+01		2.500E+01	1.736E+01	7.107E+02
19.00.00	9.550E+01	8.860E+00	1.026E+01		2.487E+01	1.744E+01	7.351E+02
19.00.10	9.834E+01	9.609E+00	9.936E+00		2.468E+01	1.652E+01	7.620E+02
19.00.20	9.124E+01	9.776E+00	9.149E+00		2.450E+01	1.632E+01	7.864E+02
19.00.30	8.860E+01	1.069E+01	9.273E+00		2.443E+01	1.512E+01	8.115E+02
19.00.40	8.682E+01	1.094E+01	8.445E+00		2.419E+01	1.568E+01	8.353E+02
19.00.50	8.857E+01	8.320E+00	7.866E+00		2.389E+01	1.700E+01	8.561E+02
19.01.00	9.355E+01	7.862E+00	1.059E+01		2.366E+01	1.564E+01	8.799E+02
19.01.10	9.444E+01	7.779E+00	1.043E+01		2.345E+01	1.756E+01	9.038E+02
19.01.20	9.890E+01	9.692E+00	1.370E+01		2.317E+01	1.820E+01	9.294E+02
19.01.30	9.860E+01	1.035E+01	1.759E+01		2.289E+01	1.856E+01	9.539E+02
19.01.40	1.029E+02	8.819E+00	2.397E+01		2.264E+01	1.724E+01	9.771E+02
19.01.50	1.210E+02	4.160E+00	2.703E+01		2.238E+01	1.468E+01	9.985E+02
19.02.00	1.193E+02	7.862E+00	2.098E+01		2.226E+01	1.832E+01	1.023E+03
19.02.10	1.195E+02	8.070E+00	1.891E+01		2.217E+01	1.904E+01	1.053E+03
19.02.20	1.199E+02	9.859E+00	1.817E+01		2.188E+01	1.908E+01	1.087E+03
19.02.30	1.191E+02	1.010E+01	1.970E+01		2.194E+01	1.720E+01	1.120E+03
19.02.40	1.114E+02	1.127E+01	1.817E+01		2.205E+01	1.720E+01	1.153E+03
19.02.50	9.985E+01	7.654E+00	1.656E+01		2.232E+01	1.672E+01	1.184E+03
19.03.00	7.784E+01	7.737E+00	1.357E+01		2.262E+01	1.612E+01	1.207E+03
19.03.10	6.517E+01	8.153E+00	1.068E+01		2.240E+01	1.724E+01	1.206E+03
19.03.20	7.335E+01	1.035E+01	9.853E+00		2.260E+01	1.708E+01	1.203E+03
19.03.30	7.273E+01	9.027E+00	9.729E+00		2.271E+01	1.692E+01	1.206E+03

*No data due to instrument malfunction.

APPENDIX B

TABLE B7.- Continued

(cc) Leg G → H

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
19.14.40	1.175E+02	9.276E+00	7.369E+00	1.876E+00	2.675E+01	2.028E+01	2.951E+02
19.14.50	1.171E+02	1.015E+01	8.114E+00	1.908E+00	2.681E+01	2.028E+01	2.817E+02
19.15.00	1.134E+02	9.692E+00	9.025E+00	1.924E+00	2.671E+01	1.976E+01	2.798E+02
19.15.10	1.115E+02	8.652E+00	7.079E+00	1.747E+00	2.662E+01	2.012E+01	2.798E+02
19.15.20	1.066E+02	7.820E+00	7.866E+00	1.923E+00	2.658E+01	1.996E+01	2.768E+02
19.15.30	1.048E+02	9.859E+00	8.445E+00		2.662E+01	1.960E+01	2.676E+02
19.15.40	1.034E+02	1.085E+01	7.824E+00		2.664E+01	1.900E+01	2.615E+02
19.15.50	9.738E+01	7.862E+00	5.671E+00		2.653E+01	1.868E+01	2.682E+02
19.16.00	9.824E+01	4.992E+00	7.659E+00		2.651E+01	1.728E+01	2.682E+02
19.16.10	9.735E+01	7.820E+00	7.327E+00		2.654E+01	1.836E+01	2.670E+02
19.16.20	9.718E+01	8.736E+00	6.706E+00		2.655E+01	1.884E+01	2.670E+02
19.16.30	9.715E+01	9.609E+00	7.866E+00		2.653E+01	1.904E+01	2.658E+02
19.16.40	9.919E+01	9.568E+00	6.996E+00		2.649E+01	1.928E+01	2.658E+02
19.16.50	1.005E+02	9.942E+00	9.646E+00		2.650E+01	1.936E+01	2.664E+02
19.17.00	1.023E+02	6.780E+00	8.694E+00	1.647E+00	2.648E+01	1.952E+01	2.670E+02
19.17.10	1.047E+02	7.779E+00	6.624E+00	1.678E+00	2.650E+01	1.956E+01	2.688E+02
19.17.20	1.041E+02	9.193E+00	5.961E+00	1.759E+00	2.653E+01	1.948E+01	2.682E+02
19.17.30	1.010E+02	1.052E+01	6.996E+00	1.767E+00	2.653E+01	1.944E+01	2.676E+02
19.17.40	1.053E+02	9.110E+00	6.913E+00	1.728E+00	2.649E+01	1.948E+01	2.682E+02
19.17.50	1.033E+02	9.609E+00	6.706E+00	1.719E+00	2.647E+01	1.940E+01	2.670E+02
19.18.00	1.057E+02	9.817E+00	6.913E+00	1.659E+00	2.646E+01	1.940E+01	2.670E+02
19.18.10	1.027E+02	8.985E+00	4.429E+00	1.664E+00	2.644E+01	1.932E+01	2.664E+02
19.18.20	1.057E+02	9.900E+00	6.499E+00	1.767E+00	2.646E+01	1.936E+01	2.658E+02
19.18.30	1.030E+02	9.443E+00	7.452E+00	1.735E+00	2.641E+01	1.932E+01	2.670E+02
19.18.40	1.044E+02	9.817E+00	7.452E+00	1.817E+00	2.637E+01	1.936E+01	2.682E+02
19.18.50	1.034E+02	1.019E+01	8.611E+00	1.769E+00	2.638E+01	1.936E+01	2.676E+02
19.19.00	1.057E+02	8.860E+00	7.741E+00	1.758E+00	2.641E+01	1.940E+01	2.670E+02
19.19.10	1.068E+02	9.692E+00	7.203E+00	1.667E+00	2.637E+01	1.940E+01	2.670E+02
19.19.20	1.047E+02	1.040E+01	6.334E+00	1.588E+00	2.636E+01	1.944E+01	2.664E+02
19.19.30	1.042E+02	9.484E+00	6.624E+00	1.692E+00	2.636E+01	1.944E+01	2.670E+02
19.19.40	1.036E+02	9.152E+00	6.913E+00	1.758E+00	2.634E+01	1.944E+01	2.676E+02
19.19.50	1.011E+02	1.019E+01	7.866E+00	1.642E+00	2.634E+01	1.944E+01	2.670E+02
19.20.00	1.027E+02	7.779E+00	6.748E+00	1.584E+00	2.633E+01	1.956E+01	2.652E+02
19.20.10	1.020E+02	6.822E+00	6.831E+00	1.511E+00	2.634E+01	1.912E+01	2.658E+02
19.20.20	1.060E+02	9.526E+00	8.735E+00	1.133E+00	2.623E+01	1.948E+01	2.633E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B7.- Continued

(dd) Leg F → E

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
19.24.20	1.047E+02	7.155E+00	8.114E+00	1.779E+00	2.595E+01	2.164E+01	2.688E+02
19.24.30	1.019E+02	4.368E+00	7.783E+00	1.622E+00	2.596E+01	2.068E+01	2.670E+02
19.24.40	1.084E+02	7.072E+00	5.920E+00	1.448E+00	2.597E+01	2.152E+01	2.688E+02
19.24.50	1.043E+02	7.612E+00	6.955E+00	1.643E+00	2.604E+01	2.140E+01	2.658E+02
19.25.00	1.032E+02	7.696E+00	6.665E+00	1.813E+00	2.608E+01	2.152E+01	2.646E+02
19.25.10	1.036E+02	8.652E+00	5.754E+00	1.800E+00	2.610E+01	2.124E+01	2.664E+02
19.25.20	1.078E+02	8.403E+00	7.245E+00	1.730E+00	2.611E+01	2.116E+01	2.652E+02
19.25.30	1.083E+02	7.072E+00	7.410E+00	1.746E+00	2.611E+01	2.116E+01	2.658E+02
19.25.40	1.075E+02	8.236E+00	7.824E+00	1.760E+00	2.600E+01	2.132E+01	2.658E+02
19.25.50	1.074E+02	7.072E+00	8.362E+00	1.793E+00	2.601E+01	2.148E+01	2.658E+02
19.26.00	1.062E+02	6.198E+00	8.569E+00	1.764E+00	2.600E+01	2.124E+01	2.676E+02
19.26.10	1.074E+02	6.364E+00	8.528E+00	1.762E+00	2.599E+01	2.172E+01	2.658E+02
19.26.20	1.066E+02	8.153E+00	7.410E+00	1.737E+00	2.597E+01	2.136E+01	2.664E+02
19.26.30	1.069E+02	9.401E+00	5.671E+00	1.744E+00	2.603E+01	2.144E+01	2.658E+02
19.26.40	1.051E+02	7.862E+00	5.340E+00	1.700E+00	2.608E+01	2.164E+01	2.652E+02
19.26.50	1.054E+02	7.779E+00	5.671E+00	1.703E+00	2.609E+01	2.184E+01	2.676E+02
19.27.00	1.039E+02	6.572E+00	7.659E+00	1.765E+00	2.603E+01	2.168E+01	2.670E+02
19.27.10	1.039E+02	7.404E+00	6.831E+00	1.779E+00	2.604E+01	2.120E+01	2.670E+02
19.27.20	1.059E+02	8.278E+00	8.031E+00	1.788E+00	2.607E+01	2.168E+01	2.664E+02
19.27.30	1.041E+02	8.528E+00	6.665E+00	1.817E+00	2.617E+01	2.208E+01	2.658E+02
19.27.40	1.027E+02	9.152E+00	5.754E+00	1.740E+00	2.612E+01	2.176E+01	2.670E+02
19.27.50	1.016E+02	8.070E+00	7.783E+00	1.728E+00	2.614E+01	2.176E+01	2.658E+02
19.28.00	1.031E+02	7.321E+00	8.611E+00	1.812E+00	2.629E+01	2.176E+01	2.676E+02
19.28.10	1.100E+02	8.985E+00	1.084E+01	1.808E+00	2.638E+01	2.168E+01	2.670E+02
19.28.20	1.102E+02	9.235E+00	1.039E+01	1.771E+00	2.645E+01	2.168E+01	2.664E+02
19.28.30	1.125E+02	9.776E+00	1.035E+01	1.726E+00	2.663E+01	2.192E+01	2.658E+02
19.28.40	1.157E+02	7.113E+00	9.066E+00	1.745E+00	2.681E+01	2.140E+01	2.652E+02
19.28.50	1.187E+02	6.156E+00	8.114E+00	1.700E+00	2.690E+01	2.120E+01	2.664E+02
19.29.00	1.145E+02	6.281E+00	7.907E+00	1.694E+00	2.704E+01	2.136E+01	2.652E+02
19.29.10	1.172E+02	6.364E+00	7.990E+00	1.692E+00	2.703E+01	2.132E+01	2.676E+02
19.29.20	1.121E+02	8.777E+00	7.700E+00	1.730E+00	2.703E+01	2.136E+01	2.664E+02
19.29.30	1.110E+02	8.944E+00	8.487E+00	1.697E+00	2.711E+01	2.136E+01	2.670E+02
19.29.40	1.103E+02	1.010E+01	7.576E+00	1.697E+00	2.712E+01	2.144E+01	2.688E+02
19.29.50	1.071E+02	9.276E+00	7.990E+00	1.681E+00	2.713E+01	2.144E+01	2.682E+02
19.30.00	1.042E+02	8.569E+00	7.741E+00	1.711E+00	2.734E+01	2.148E+01	2.682E+02
19.30.10	1.048E+02	8.777E+00	8.983E+00	1.787E+00	2.754E+01	2.136E+01	2.682E+02
19.30.20	1.065E+02	9.526E+00	1.080E+01	1.757E+00	2.762E+01	2.140E+01	2.633E+02
19.30.30	1.093E+02	8.403E+00	1.055E+01	1.781E+00	2.744E+01	2.164E+01	2.676E+02
19.30.40	1.030E+02	6.739E+00	1.134E+01	1.749E+00	2.753E+01	2.156E+01	2.633E+02
19.30.50	1.052E+02	8.819E+00	9.108E+00	1.628E+00	2.745E+01	2.164E+01	2.682E+02
19.31.00	1.029E+02	7.737E+00	1.039E+01	1.662E+00	2.735E+01	2.152E+01	2.652E+02

APPENDIX B

TABLE B7.- Continued

(ee) Leg C → D

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
19.34.40	1.119E+02	8.777E+00	1.333E+01		2.755E+01	2.240E+01	2.725E+02
19.34.50	1.076E+02	7.737E+00	1.639E+01		2.747E+01	2.168E+01	2.719E+02
19.35.00	1.067E+02	9.651E+00	1.693E+01		2.762E+01	2.220E+01	2.670E+02
19.35.10	1.060E+02	9.110E+00	1.742E+01		2.748E+01	2.220E+01	2.688E+02
19.35.20	1.122E+02	7.404E+00	1.784E+01		2.742E+01	2.192E+01	2.676E+02
19.35.30	1.095E+02	8.444E+00	1.515E+01		2.739E+01	2.224E+01	2.707E+02
19.35.40	1.105E+02	6.656E+00	1.374E+01		2.738E+01	2.212E+01	2.658E+02
19.35.50	1.133E+02	7.987E+00	1.217E+01	1.678E+00	2.727E+01	2.212E+01	2.707E+02
19.36.00	1.070E+02	1.023E+01	1.138E+01	1.728E+00	2.726E+01	2.208E+01	2.664E+02
19.36.10	1.070E+02	9.276E+00	1.217E+01	1.770E+00	2.725E+01	2.188E+01	2.688E+02
19.36.20	1.124E+02	8.444E+00	1.150E+01	1.732E+00	2.722E+01	2.180E+01	2.688E+02
19.36.30	1.128E+02	8.444E+00	1.146E+01	1.800E+00	2.728E+01	2.188E+01	2.670E+02
19.36.40	1.082E+02	7.737E+00	1.039E+01	1.777E+00	2.721E+01	2.212E+01	2.688E+02
19.36.50	1.039E+02	8.278E+00	1.109E+01	1.708E+00	2.722E+01	2.216E+01	2.688E+02
19.37.00	1.018E+02	1.085E+01	1.047E+01	1.652E+00	2.713E+01	2.208E+01	2.670E+02
19.37.10	1.055E+02	1.006E+01	1.026E+01	1.703E+00	2.710E+01	2.212E+01	2.694E+02
19.37.20	1.023E+02	1.035E+01	1.304E+01	1.689E+00	2.713E+01	2.212E+01	2.713E+02
19.37.30	9.933E+01	1.127E+01	1.424E+01	1.577E+00	2.717E+01	2.196E+01	2.664E+02
19.37.40	1.031E+02	8.195E+00	1.192E+01	1.746E+00	2.718E+01	2.212E+01	2.664E+02
19.37.50	9.972E+01	9.900E+00	1.155E+01	1.714E+00	2.724E+01	2.220E+01	2.713E+02
19.38.00	9.553E+01	1.019E+01	1.341E+01	1.599E+00	2.720E+01	2.200E+01	2.615E+02
19.38.10	1.023E+02	9.942E+00	1.171E+01	1.683E+00	2.714E+01	2.180E+01	2.725E+02
19.38.20	1.010E+02	9.526E+00	1.039E+01	1.708E+00	2.713E+01	2.184E+01	2.658E+02
19.38.30	1.015E+02	8.819E+00	1.018E+01	1.692E+00	2.716E+01	2.144E+01	2.664E+02
19.38.40	1.053E+02	7.238E+00	9.729E+00	1.635E+00	2.707E+01	2.160E+01	2.688E+02
19.38.50	1.024E+02	8.528E+00	8.694E+00	1.626E+00	2.694E+01	2.184E+01	2.688E+02
19.39.00	1.001E+02	1.073E+01	1.113E+01		2.708E+01	2.136E+01	2.688E+02
19.39.10	1.020E+02	9.734E+00	1.167E+01		2.705E+01	2.184E+01	2.713E+02
19.39.20	1.005E+02	9.360E+00	1.146E+01		2.701E+01	2.176E+01	2.694E+02
19.39.30	1.035E+02	7.280E+00	9.936E+00		2.671E+01	2.240E+01	2.707E+02
19.39.40	1.000E+02	8.070E+00	8.652E+00		2.658E+01	2.200E+01	2.688E+02
19.39.50	1.015E+02	9.068E+00	6.210E+00		2.658E+01	2.208E+01	2.688E+02
19.40.00	9.962E+01	8.777E+00	8.404E+00		2.646E+01	2.204E+01	2.694E+02
19.40.10	9.969E+01	8.320E+00	1.080E+01		2.646E+01	2.188E+01	2.682E+02
19.40.20	1.035E+02	8.195E+00	1.055E+01		2.643E+01	2.200E+01	2.676E+02
19.40.30	1.014E+02	1.173E+01	1.105E+01		2.642E+01	2.176E+01	2.682E+02
19.40.40	1.037E+02	9.526E+00	1.059E+01		2.634E+01	2.168E+01	2.694E+02
19.40.50	1.048E+02	8.361E+00	8.611E+00		2.632E+01	2.164E+01	2.682E+02
19.41.00	1.030E+02	7.696E+00	8.569E+00		2.630E+01	2.168E+01	2.682E+02
19.41.10	9.850E+01	8.777E+00	8.611E+00		2.628E+01	2.168E+01	2.688E+02
19.41.20	1.039E+02	8.736E+00	8.155E+00		2.614E+01	2.188E+01	2.676E+02
19.41.30	1.015E+02	1.044E+01	5.878E+00		2.616E+01	2.196E+01	2.682E+02
19.41.40	1.042E+02	6.947E+00	7.866E+00		2.623E+01	2.108E+01	2.682E+02
19.41.50	1.029E+02	5.075E+00	7.990E+00		2.623E+01	2.172E+01	2.670E+02
19.42.00	1.054E+02	7.030E+00	8.776E+00		2.631E+01	2.132E+01	2.688E+02
19.42.10	1.031E+02	6.448E+00	7.907E+00		2.634E+01	2.048E+01	2.670E+02
19.42.20	1.035E+02	7.737E+00	7.617E+00		2.634E+01	2.136E+01	2.676E+02
19.42.30	1.031E+02	7.987E+00	7.824E+00		2.640E+01	2.124E+01	2.676E+02
19.42.40	1.030E+02	8.819E+00	5.547E+00		2.622E+01	2.196E+01	2.652E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B7.- Continued

(ff) Leg B → A

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
19.44.30	8.880E+01	6.323E+00	8.611E+00		2.858E+01	1.852E+01	2.597E+02
19.44.40	8.860E+01	5.449E+00	8.362E+00		2.850E+01	1.880E+01	2.646E+02
19.44.50	8.619E+01	6.489E+00	6.458E+00		2.844E+01	1.908E+01	2.762E+02
19.45.00	8.834E+01	7.987E+00	6.582E+00	1.466E+00	2.861E+01	1.892E+01	2.603E+02
19.45.10	8.768E+01	8.944E+00	5.920E+00	1.394E+00	2.841E+01	1.848E+01	2.652E+02
19.45.20	8.659E+01	9.817E+00	6.417E+00	1.460E+00	2.833E+01	1.832E+01	2.646E+02
19.45.30	9.022E+01	9.401E+00	8.611E+00	1.332E+00	2.804E+01	2.032E+01	2.664E+02
19.45.40	9.744E+01	8.819E+00	8.321E+00	1.268E+00	2.791E+01	2.060E+01	2.658E+02
19.45.50	9.774E+01	7.113E+00	9.646E+00	1.346E+00	2.785E+01	1.992E+01	2.682E+02
19.46.00	9.487E+01	7.779E+00	9.025E+00	1.325E+00	2.769E+01	1.912E+01	2.664E+02
19.46.10	9.203E+01	9.942E+00	9.563E+00	1.429E+00	2.789E+01	1.832E+01	2.670E+02
19.46.20	9.032E+01	6.697E+00	7.824E+00	1.726E+00	2.763E+01	1.884E+01	2.676E+02
19.46.30	9.299E+01	7.612E+00	7.783E+00	1.524E+00	2.751E+01	1.948E+01	2.664E+02
19.46.40	9.616E+01	9.193E+00	9.604E+00	1.633E+00	2.708E+01	2.124E+01	2.670E+02
19.46.50	9.936E+01	7.321E+00	1.142E+01	1.759E+00	2.706E+01	2.100E+01	2.676E+02
19.47.00	9.903E+01	6.988E+00	1.258E+01	1.696E+00	2.711E+01	2.072E+01	2.670E+02
19.47.10	9.758E+01	9.276E+00	1.138E+01	1.549E+00	2.692E+01	2.140E+01	2.676E+02
19.47.20	9.748E+01	9.360E+00	1.221E+01	1.498E+00	2.710E+01	2.080E+01	2.688E+02
19.47.30	9.652E+01	9.651E+00	1.283E+01	1.657E+00	2.709E+01	2.096E+01	2.694E+02
19.47.40	1.030E+02	7.779E+00	1.283E+01	1.477E+00	2.702E+01	2.152E+01	2.688E+02
19.47.50	1.035E+02	1.056E+01	1.030E+01	1.573E+00	2.723E+01	2.080E+01	2.682E+02
19.48.00	1.031E+02	1.185E+01	8.445E+00	1.588E+00	2.720E+01	2.112E+01	2.701E+02
19.48.10	1.040E+02	9.900E+00	1.043E+01	1.620E+00	2.708E+01	2.176E+01	2.701E+02
19.48.20	1.029E+02	8.902E+00	1.010E+01	1.470E+00	2.722E+01	2.124E+01	2.639E+02
19.48.30	1.038E+02	8.611E+00	9.604E+00	1.518E+00	2.719E+01	2.120E+01	2.688E+02
19.48.40	1.050E+02	7.737E+00	1.059E+01	1.762E+00	2.719E+01	2.152E+01	2.701E+02
19.48.50	1.052E+02	8.320E+00	1.014E+01	1.659E+00	2.737E+01	2.140E+01	2.676E+02
19.49.00	1.075E+02	9.484E+00	1.035E+01	1.668E+00	2.733E+01	2.172E+01	2.670E+02
19.49.10	1.052E+02	9.568E+00	1.059E+01	1.774E+00	2.742E+01	2.168E+01	2.701E+02
19.49.20	1.068E+02	9.484E+00	9.977E+00	1.794E+00	2.746E+01	2.152E+01	2.688E+02
19.49.30	1.091E+02	8.569E+00	1.068E+01		2.767E+01	2.128E+01	2.694E+02
19.49.40	1.062E+02	5.824E+00	1.010E+01		2.763E+01	2.164E+01	2.701E+02
19.49.50	1.057E+02	9.734E+00	1.035E+01		2.765E+01	2.176E+01	2.701E+02
19.50.00	1.087E+02	9.734E+00	1.250E+01		2.776E+01	2.160E+01	2.670E+02
19.50.10	1.086E+02	9.484E+00	1.225E+01		2.778E+01	2.132E+01	2.682E+02
19.50.20	1.060E+02	4.825E+00	1.374E+01		2.768E+01	1.988E+01	2.682E+02
19.50.30	1.106E+02	7.155E+00	1.237E+01		2.768E+01	2.172E+01	2.737E+02
19.50.40	1.107E+02	7.488E+00	1.233E+01	1.814E+00	2.782E+01	2.148E+01	2.658E+02
19.50.50	1.113E+02	9.859E+00	1.208E+01	1.705E+00	2.770E+01	2.152E+01	2.731E+02
19.51.00	1.115E+02	8.860E+00	1.059E+01	1.629E+00	2.783E+01	2.152E+01	2.707E+02
19.51.10	1.088E+02	7.155E+00	1.366E+01	1.698E+00	2.782E+01	2.188E+01	2.688E+02
19.51.20	1.117E+02	8.320E+00	1.449E+01	1.653E+00	2.774E+01	2.192E+01	2.719E+02
19.51.30	1.125E+02	7.529E+00	1.469E+01	1.817E+00	2.782E+01	2.220E+01	2.756E+02
19.51.40	1.101E+02	8.902E+00	1.684E+01	1.436E+00	2.805E+01	2.220E+01	2.719E+02
19.51.50	1.135E+02	8.777E+00	1.618E+01	1.595E+00	2.824E+01	2.224E+01	2.658E+02
19.52.00	1.140E+02	8.860E+00	1.436E+01	1.684E+00	2.831E+01	2.156E+01	2.676E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B7.- Continued

(gg) Spiral at A

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
19.52.00	1.140E+02	8.860E+00	1.436E+01		2.831E+01	2.156E+01	2.676E+02
19.52.10	1.181E+02	7.321E+00	1.275E+01		2.825E+01	2.172E+01	2.774E+02
19.52.20	1.084E+02	9.193E+00	1.213E+01		2.771E+01	2.204E+01	3.159E+02
19.52.30	1.023E+02	8.028E+00	1.821E+01		2.727E+01	2.112E+01	3.532E+02
19.52.40	9.556E+01	1.031E+01	2.115E+01		2.704E+01	2.204E+01	3.819E+02
19.52.50	1.007E+02	1.098E+01	2.657E+01		2.674E+01	2.208E+01	4.210E+02
19.53.00	9.810E+01	1.081E+01	2.811E+01		2.657E+01	2.088E+01	4.454E+02
19.53.10	9.748E+01	1.347E+01	2.906E+01		2.643E+01	2.140E+01	4.680E+02
19.53.20	1.150E+02	1.027E+01	2.455E+01		2.589E+01	2.200E+01	5.139E+02
19.53.30	1.169E+02	9.817E+00	1.978E+01		2.556E+01	2.128E+01	5.481E+02
19.53.40	1.162E+02	8.070E+00	1.755E+01		2.530E+01	2.168E+01	5.695E+02
19.53.50	1.157E+02	6.864E+00	1.896E+01		2.500E+01	2.020E+01	5.945E+02
19.54.00	1.139E+02	7.571E+00	1.569E+01		2.512E+01	1.996E+01	6.196E+02
19.54.10	1.099E+02	8.777E+00	1.233E+01		2.473E+01	2.012E+01	6.520E+02
19.54.20	1.087E+02	7.529E+00	1.167E+01		2.469E+01	1.876E+01	6.801E+02
19.54.30	1.005E+02	8.736E+00	1.088E+01		2.442E+01	1.868E+01	7.100E+02
19.54.40	9.471E+01	8.153E+00	1.018E+01		2.408E+01	1.964E+01	7.351E+02
19.54.50	7.359E+01	1.456E+01	2.028E+01		2.435E+01	1.832E+01	7.577E+02
19.55.00	7.758E+01	1.331E+01	2.951E+01		2.434E+01	1.748E+01	7.834E+02
19.55.10	8.388E+01	9.859E+00	2.898E+01		2.420E+01	1.672E+01	8.109E+02
19.55.20	8.778E+01	8.528E+00	2.471E+01		2.417E+01	1.636E+01	8.359E+02
19.55.30	8.679E+01	9.235E+00	1.660E+01		2.425E+01	1.652E+01	8.616E+02
19.55.40	1.042E+02	8.611E+00	1.465E+01		2.400E+01	1.604E+01	8.848E+02
19.55.50	1.094E+02	9.734E+00	1.519E+01		2.376E+01	1.748E+01	9.050E+02
19.56.00	1.158E+02	8.944E+00	1.788E+01		2.346E+01	1.844E+01	9.270E+02
19.56.10	1.246E+02	7.820E+00	1.635E+01		2.317E+01	1.844E+01	9.545E+02
19.56.20	1.275E+02	7.072E+00	1.486E+01		2.291E+01	1.884E+01	9.826E+02
19.56.30	1.377E+02	7.987E+00	1.320E+01		2.263E+01	1.912E+01	1.009E+03
19.56.40	1.389E+02	8.153E+00	1.316E+01		2.249E+01	1.936E+01	1.035E+03
19.56.50	1.393E+02	8.070E+00	1.366E+01		2.225E+01	1.924E+01	1.063E+03
19.57.00	1.325E+02	1.002E+01	1.179E+01		2.199E+01	1.908E+01	1.092E+03
19.57.10	1.276E+02	9.526E+00	1.121E+01		2.180E+01	1.900E+01	1.119E+03
19.57.20	1.243E+02	9.484E+00	1.167E+01		2.162E+01	1.888E+01	1.143E+03
19.57.30	1.205E+02	8.860E+00	1.196E+01		2.148E+01	1.868E+01	1.168E+03
19.57.40	1.210E+02	7.404E+00	1.440E+01		2.128E+01	1.764E+01	1.194E+03
19.57.50	1.244E+02	8.320E+00	1.598E+01		2.133E+01	1.768E+01	1.197E+03

*No data due to instrument malfunction.

APPENDIX B

TABLE B7.- Concluded

(hh) Leg G → H

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
20.17.40	1.064E+02	7.280E+00	6.996E+00		2.718E+01	1.956E+01	2.743E+02
20.17.50	1.042E+02	1.015E+01	6.665E+00		2.709E+01	1.940E+01	2.749E+02
20.18.00	1.002E+02	8.819E+00	6.127E+00		2.703E+01	1.948E+01	2.762E+02
20.18.10	1.040E+02	9.651E+00	7.576E+00		2.719E+01	1.944E+01	2.725E+02
20.18.20	1.035E+02	1.064E+01	9.273E+00		2.709E+01	1.948E+01	2.713E+02
20.18.30	1.036E+02	9.526E+00	8.776E+00		2.704E+01	1.952E+01	2.719E+02
20.18.40	1.012E+02	8.528E+00	9.563E+00		2.710E+01	1.952E+01	2.737E+02
20.18.50	1.027E+02	9.318E+00	8.528E+00		2.703E+01	1.948E+01	2.749E+02
20.19.00	1.024E+02	9.942E+00	9.397E+00		2.702E+01	1.948E+01	2.756E+02
20.19.10	1.010E+02	1.127E+01	7.452E+00		2.696E+01	1.952E+01	2.762E+02
20.19.20	1.012E+02	1.023E+01	7.162E+00		2.693E+01	1.956E+01	2.774E+02
20.19.30	1.016E+02	1.027E+01	6.996E+00		2.689E+01	1.956E+01	2.768E+02
20.19.40	1.032E+02	7.529E+00	9.522E+00		2.687E+01	1.836E+01	2.780E+02
20.19.50	1.019E+02	8.403E+00	9.397E+00		2.683E+01	1.968E+01	2.780E+02
20.20.00	1.008E+02	7.820E+00	9.439E+00		2.685E+01	1.964E+01	2.780E+02
20.20.10	1.034E+02	1.148E+01	1.006E+01		2.682E+01	1.968E+01	2.762E+02
20.20.20	1.024E+02	9.068E+00	8.155E+00		2.678E+01	1.972E+01	2.774E+02
20.20.30	1.013E+02	9.776E+00	8.321E+00		2.674E+01	1.976E+01	2.780E+02
20.20.40	1.036E+02	9.942E+00	6.872E+00		2.665E+01	1.980E+01	2.780E+02
20.20.50	1.049E+02	9.027E+00	4.181E+00		2.666E+01	1.976E+01	2.768E+02
20.21.00	1.006E+02	1.098E+01	5.133E+00		2.661E+01	1.972E+01	2.786E+02
20.21.10	1.043E+02	8.944E+00	7.493E+00		2.656E+01	1.976E+01	2.786E+02
20.21.20	1.021E+02	1.094E+01	6.748E+00		2.654E+01	1.980E+01	2.786E+02
20.21.30	1.020E+02	9.776E+00	7.948E+00		2.653E+01	1.984E+01	2.804E+02
20.21.40	1.038E+02	1.098E+01	8.321E+00		2.649E+01	1.984E+01	2.792E+02
20.21.50	1.043E+02	1.177E+01	7.203E+00		2.648E+01	1.992E+01	2.798E+02
20.22.00	1.027E+02	8.070E+00	6.789E+00		2.646E+01	1.992E+01	2.798E+02
20.22.10	1.052E+02	5.657E+00	6.334E+00		2.649E+01	1.996E+01	2.780E+02
20.22.20	1.029E+02	5.782E+00	1.026E+01		2.647E+01	1.660E+01	2.756E+02
20.22.30	1.016E+02	1.064E+01	9.563E+00		2.642E+01	1.996E+01	2.798E+02
20.22.40	1.049E+02	1.102E+01	9.936E+00		2.644E+01	2.000E+01	2.792E+02
20.22.50	1.048E+02	1.077E+01	1.010E+01		2.641E+01	1.996E+01	2.786E+02
20.23.00	1.055E+02	8.486E+00	9.315E+00		2.644E+01	1.972E+01	2.798E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- AIRCRAFT DATA FOR PRIMARY EXPERIMENT ON JULY 27, 1978

(a) Leg K → L

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
12.55.40	6.946E+01	2.000E+01	1.610E+01	1.899E+00	2.491E+01	1.976E+01	6.037E+02
12.55.50	6.893E+01	1.863E+01	1.643E+01	1.995E+00	2.489E+01	1.984E+01	6.037E+02
12.56.00	7.266E+01	1.880E+01	1.560E+01	2.023E+00	2.486E+01	1.992E+01	6.037E+02
12.56.10	7.253E+01	1.901E+01	1.469E+01	2.024E+00	2.492E+01	1.984E+01	6.025E+02
12.56.20	7.184E+01	1.680E+01	1.453E+01	1.930E+00	2.496E+01	1.976E+01	6.025E+02
12.56.30	6.959E+01	1.626E+01	1.449E+01	1.891E+00	2.495E+01	1.968E+01	6.049E+02
12.56.40	6.864E+01	1.693E+01	1.457E+01	1.814E+00	2.489E+01	1.976E+01	6.049E+02
12.56.50	7.194E+01	1.676E+01	1.506E+01	1.826E+00	2.485E+01	1.976E+01	6.037E+02
12.57.00	7.821E+01	1.572E+01	1.482E+01	1.799E+00	2.490E+01	1.972E+01	6.019E+02
12.57.10	7.590E+01	1.493E+01	1.465E+01	1.755E+00	2.492E+01	1.960E+01	6.043E+02
12.57.20	6.814E+01	1.668E+01	1.411E+01	1.779E+00	2.491E+01	1.956E+01	6.037E+02
12.57.30	7.250E+01	1.231E+01	1.722E+01		2.487E+01	1.764E+01	6.043E+02
12.57.40	7.104E+01	1.431E+01	1.457E+01		2.488E+01	1.932E+01	6.049E+02
12.57.50	7.299E+01	1.551E+01	1.320E+01	1.803E+00	2.489E+01	1.964E+01	6.037E+02
12.58.00	7.778E+01	1.431E+01	1.357E+01	1.797E+00	2.487E+01	1.880E+01	6.043E+02
12.58.10	7.543E+01	1.181E+01	1.535E+01	1.618E+00	2.486E+01	1.824E+01	6.055E+02
12.58.20	7.286E+01	1.356E+01	1.444E+01	1.518E+00	2.488E+01	1.948E+01	6.055E+02
12.58.30	7.682E+01	1.343E+01	1.399E+01	1.735E+00	2.491E+01	1.908E+01	6.043E+02
12.58.40	6.821E+01	1.460E+01	1.308E+01	1.800E+00	2.498E+01	1.888E+01	6.031E+02
12.58.50	6.273E+01	1.530E+01	1.250E+01	1.786E+00	2.500E+01	1.896E+01	6.025E+02
12.59.00	6.547E+01	1.605E+01	1.138E+01	1.726E+00	2.499E+01	1.908E+01	6.031E+02
12.59.10	6.543E+01	1.472E+01	1.117E+01	1.872E+00	2.499E+01	1.892E+01	6.037E+02
12.59.20	6.474E+01	1.480E+01	1.109E+01	1.788E+00	2.500E+01	1.896E+01	6.055E+02
12.59.30	6.342E+01	1.418E+01	1.097E+01	1.872E+00	2.499E+01	1.904E+01	6.055E+02
12.59.40	6.220E+01	1.501E+01	1.022E+01	1.806E+00	2.498E+01	1.900E+01	6.043E+02
12.59.50	6.382E+01	1.410E+01	1.084E+01	1.764E+00	2.498E+01	1.900E+01	6.049E+02
13.00.00	5.966E+01	1.443E+01	1.072E+01	1.831E+00	2.497E+01	1.888E+01	6.068E+02
13.00.10	6.048E+01	1.439E+01	1.105E+01		2.499E+01	1.900E+01	6.049E+02
13.00.20	6.336E+01	1.248E+01	1.126E+01		2.493E+01	1.892E+01	6.049E+02
13.00.30	7.161E+01	1.260E+01	1.080E+01		2.492E+01	1.900E+01	6.037E+02
13.00.40	7.339E+01	1.381E+01	1.043E+01		2.493E+01	1.864E+01	6.049E+02
13.00.50	7.015E+01	1.252E+01	1.043E+01		2.494E+01	1.872E+01	6.043E+02
13.01.00	6.880E+01	1.381E+01	1.035E+01		2.489E+01	1.856E+01	6.086E+02
13.01.10	6.788E+01	1.260E+01	9.687E+00		2.497E+01	1.860E+01	6.043E+02
13.01.20	6.705E+01	1.168E+01	1.001E+01		2.500E+01	1.804E+01	6.043E+02
13.01.30	6.798E+01	1.243E+01	9.894E+00	1.484E+00	2.521E+01	1.596E+01	6.062E+02
13.01.40	6.270E+01	1.314E+01	9.315E+00	1.594E+00	2.518E+01	1.612E+01	6.074E+02
13.01.50	6.197E+01	1.256E+01	8.735E+00	1.550E+00	2.514E+01	1.676E+01	6.031E+02
13.02.00	6.352E+01	1.127E+01	9.315E+00	1.568E+00	2.502E+01	1.732E+01	6.043E+02
13.02.10	6.369E+01	1.127E+01	9.397E+00	1.648E+00	2.499E+01	1.736E+01	6.043E+02
13.02.20	6.114E+01	1.268E+01	1.014E+01	1.598E+00	2.504E+01	1.704E+01	6.037E+02
13.02.30	6.210E+01	1.131E+01	1.200E+01		2.496E+01	1.616E+01	6.049E+02
13.02.40	6.184E+01	1.160E+01	1.117E+01		2.485E+01	1.784E+01	6.062E+02
13.02.50	6.276E+01	1.289E+01	1.055E+01		2.479E+01	1.840E+01	6.049E+02
13.03.00	5.956E+01	1.181E+01	9.604E+00		2.476E+01	1.860E+01	6.037E+02
13.03.10	5.979E+01	1.160E+01	9.646E+00		2.476E+01	1.832E+01	6.043E+02
13.03.20	6.378E+01	1.060E+01	1.155E+01		2.469E+01	1.580E+01	6.037E+02
13.03.30	6.550E+01	9.692E+00	1.217E+01		2.475E+01	1.748E+01	5.854E+02
13.03.40	6.177E+01	1.135E+01	1.030E+01		2.523E+01	1.912E+01	5.395E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B8.- Continued

(b) Spiral at L

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
13.08.00	3.930E+01	8.777E+00	1.084E+01		2.558E+01	2.196E+01	1.393E+02
13.08.10	4.758E+01	8.278E+00	1.266E+01		2.541E+01	2.124E+01	1.607E+02
13.08.20	4.567E+01	1.015E+01	9.853E+00		2.537E+01	2.176E+01	1.979E+02
13.08.30	4.715E+01	9.401E+00	1.010E+01		2.536E+01	2.148E+01	2.322E+02
13.08.40	5.177E+01	9.152E+00	1.006E+01		2.660E+01	2.036E+01	2.621E+02
13.08.50	7.220E+01	1.006E+01	9.108E+00		2.645E+01	2.064E+01	2.976E+02
13.09.00	5.874E+01	1.010E+01	9.190E+00		2.629E+01	2.048E+01	3.306E+02
13.09.10	6.487E+01	1.040E+01	9.232E+00		2.608E+01	2.048E+01	3.636E+02
13.09.20	6.570E+01	8.403E+00	9.149E+00		2.582E+01	2.044E+01	3.941E+02
13.09.30	6.530E+01	8.070E+00	8.983E+00		2.558E+01	2.040E+01	4.259E+02
13.09.40	6.138E+01	8.486E+00	8.694E+00		2.535E+01	2.040E+01	4.540E+02
13.09.50	5.613E+01	8.694E+00	7.700E+00		2.511E+01	2.028E+01	4.833E+02
13.10.00	5.491E+01	9.984E+00	7.948E+00		2.499E+01	2.016E+01	5.096E+02
13.10.10	5.187E+01	1.056E+01	7.741E+00		2.498E+01	1.936E+01	5.347E+02
13.10.20	5.392E+01	8.944E+00	9.729E+00		2.510E+01	1.744E+01	5.609E+02
13.10.30	6.114E+01	7.904E+00	1.063E+01		2.500E+01	1.736E+01	5.890E+02
13.10.40	6.345E+01	6.281E+00	1.208E+01		2.461E+01	1.824E+01	6.184E+02
13.10.50	7.425E+01	7.571E+00	9.936E+00		2.430E+01	1.908E+01	6.526E+02
13.11.00	7.500E+01	8.652E+00	9.563E+00		2.406E+01	1.900E+01	6.838E+02
13.11.10	6.576E+01	9.318E+00	9.777E+00		2.383E+01	1.908E+01	7.119E+02
13.11.20	7.081E+01	7.737E+00	1.006E+01		2.356E+01	1.904E+01	7.418E+02
13.11.30	6.164E+01	8.278E+00	9.066E+00		2.328E+01	1.896E+01	7.736E+02
13.11.40	5.798E+01	9.609E+00	8.197E+00		2.299E+01	1.868E+01	8.054E+02
13.11.50	6.573E+01	9.068E+00	8.197E+00		2.276E+01	1.832E+01	8.341E+02
13.12.00	6.576E+01	8.777E+00	8.652E+00		2.265E+01	1.712E+01	8.634E+02
13.12.10	6.081E+01	9.027E+00	9.563E+00		2.262E+01	1.556E+01	8.946E+02
13.12.20	5.685E+01	1.040E+01	9.687E+00		2.243E+01	1.472E+01	9.276E+02
13.12.30	5.695E+01	9.401E+00	8.694E+00		2.222E+01	1.468E+01	9.569E+02
13.12.40	5.705E+01	9.193E+00	8.031E+00		2.204E+01	1.420E+01	9.863E+02
13.12.50	5.788E+01	8.944E+00	8.404E+00		2.175E+01	1.412E+01	1.019E+03
13.13.00	5.689E+01	8.985E+00	8.404E+00		2.154E+01	1.392E+01	1.049E+03
13.13.10	5.742E+01	8.902E+00	9.936E+00		2.126E+01	1.388E+01	1.082E+03
13.13.20	5.679E+01	9.692E+00	8.901E+00		2.103E+01	1.412E+01	1.112E+03
13.13.30	5.827E+01	8.902E+00	8.694E+00		2.075E+01	1.436E+01	1.142E+03
13.13.40	5.907E+01	8.652E+00	7.948E+00		2.051E+01	1.460E+01	1.170E+03
13.13.50	5.854E+01	7.737E+00	7.576E+00		2.041E+01	1.368E+01	1.197E+03
13.14.00	5.563E+01	9.360E+00	8.776E+00		2.026E+01	1.308E+01	1.224E+03
13.14.10	5.478E+01	9.110E+00	7.327E+00		2.006E+01	1.340E+01	1.249E+03
13.14.20	5.794E+01	9.609E+00	8.197E+00		1.989E+01	1.376E+01	1.270E+03
13.14.30	5.692E+01	1.094E+01	7.659E+00		1.970E+01	1.376E+01	1.293E+03
13.14.40	5.517E+01	7.612E+00	6.665E+00		1.939E+01	1.408E+01	1.323E+03
13.14.50	5.864E+01	8.070E+00	6.499E+00		1.913E+01	1.396E+01	1.352E+03
13.15.00	5.775E+01	9.942E+00	6.955E+00		1.893E+01	1.352E+01	1.383E+03
13.15.10	6.029E+01	8.569E+00	8.569E+00		1.873E+01	1.328E+01	1.412E+03
13.15.20	5.834E+01	8.736E+00	9.604E+00		1.855E+01	1.272E+01	1.442E+03
13.15.30	5.897E+01	8.985E+00	8.942E+00		1.830E+01	1.236E+01	1.473E+03
13.15.40	5.781E+01	9.568E+00	8.362E+00		1.805E+01	1.224E+01	1.503E+03
13.15.50	5.913E+01	9.276E+00	7.079E+00		1.794E+01	1.144E+01	1.525E+03
13.16.00	6.015E+01	8.819E+00	8.031E+00		1.770E+01	1.040E+01	1.554E+03
13.16.10	5.705E+01	9.651E+00	7.617E+00		1.754E+01	1.136E+01	1.564E+03

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- Continued

(c) Leg H → G

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
13.25.40	7.481E+01	7.196E+00	8.611E+00	1.873E+00	2.503E+01	1.844E+01	5.866E+02
13.25.50	7.329E+01	7.113E+00	8.197E+00		2.479E+01	1.876E+01	5.945E+02
13.26.00	7.560E+01	8.361E+00	8.031E+00	1.709E+00	2.476E+01	1.904E+01	5.921E+02
13.26.10	7.458E+01	7.945E+00	9.646E+00	2.029E+00	2.481E+01	1.904E+01	5.897E+02
13.26.20	7.758E+01	8.694E+00	9.315E+00	1.872E+00	2.483E+01	1.904E+01	5.897E+02
13.26.30	7.764E+01	7.696E+00	9.273E+00	2.154E+00	2.473E+01	1.904E+01	5.952E+02
13.26.40	7.599E+01	7.820E+00	8.652E+00	2.095E+00	2.477E+01	1.904E+01	5.927E+02
13.26.50	7.557E+01	8.361E+00	7.203E+00	1.798E+00	2.479E+01	1.904E+01	5.927E+02
13.27.00	7.682E+01	8.361E+00	8.280E+00	1.784E+00	2.478E+01	1.904E+01	5.939E+02
13.27.10	7.814E+01	7.737E+00	8.238E+00	1.957E+00	2.481E+01	1.908E+01	5.915E+02
13.27.20	7.504E+01	7.904E+00	7.038E+00	1.804E+00	2.478E+01	1.916E+01	5.921E+02
13.27.30	7.656E+01	7.155E+00	6.003E+00	1.852E+00	2.473E+01	1.920E+01	5.945E+02
13.27.40	7.415E+01	6.364E+00	6.499E+00	2.092E+00	2.472E+01	1.928E+01	5.933E+02
13.27.50	7.741E+01	7.155E+00	6.872E+00	1.922E+00	2.474E+01	1.928E+01	5.927E+02
13.28.00	7.530E+01	8.320E+00	6.375E+00	2.031E+00	2.476E+01	1.932E+01	5.909E+02
13.28.10	7.335E+01	5.116E+00	6.789E+00	1.984E+00	2.470E+01	1.940E+01	5.921E+02
13.28.20	7.500E+01	6.697E+00	8.114E+00	1.817E+00	2.468E+01	1.936E+01	5.945E+02
13.28.30	7.629E+01	7.030E+00	6.003E+00	2.148E+00	2.473E+01	1.940E+01	5.933E+02
13.28.40	7.649E+01	7.737E+00	5.340E+00	1.820E+00	2.475E+01	1.940E+01	5.921E+02
13.28.50	7.731E+01	7.862E+00	5.299E+00	1.759E+00	2.474E+01	1.920E+01	5.964E+02
13.29.00	7.599E+01	8.320E+00	4.926E+00	2.020E+00	2.483E+01	1.896E+01	5.945E+02
13.29.10	7.524E+01	7.904E+00	5.547E+00	1.752E+00	2.492E+01	1.852E+01	5.939E+02
13.29.20	7.672E+01	6.531E+00	5.299E+00	1.792E+00	2.488E+01	1.852E+01	5.945E+02
13.29.30	7.477E+01	6.406E+00	6.831E+00		2.495E+01	1.732E+01	5.915E+02
13.29.40	7.448E+01	6.364E+00	6.872E+00		2.498E+01	1.840E+01	5.903E+02
13.29.50	7.652E+01	6.697E+00	6.251E+00		2.494E+01	1.832E+01	5.939E+02
13.30.00	7.359E+01	6.822E+00	7.162E+00	1.696E+00	2.492E+01	1.816E+01	5.964E+02
13.30.10	7.672E+01	6.905E+00	6.127E+00	1.708E+00	2.489E+01	1.844E+01	5.945E+02
13.30.20	7.910E+01	7.196E+00	6.955E+00	1.760E+00	2.490E+01	1.848E+01	5.921E+02
13.30.30	7.758E+01	5.824E+00	7.534E+00	1.662E+00	2.489E+01	1.812E+01	5.933E+02
13.30.40	7.778E+01	6.323E+00	6.955E+00	1.615E+00	2.490E+01	1.824E+01	5.945E+02
13.30.50	7.778E+01	6.156E+00	5.837E+00	1.729E+00	2.492E+01	1.808E+01	5.939E+02
13.31.00	7.530E+01	6.032E+00	6.085E+00	1.672E+00	2.493E+01	1.804E+01	5.952E+02
13.31.10	7.619E+01	7.612E+00	7.369E+00	1.622E+00	2.503E+01	1.772E+01	5.933E+02
13.31.20	7.408E+01	7.155E+00	8.155E+00	1.771E+00	2.510E+01	1.744E+01	5.927E+02
13.31.30	7.187E+01	5.740E+00	8.983E+00		2.505E+01	1.712E+01	5.964E+02
13.31.40	7.260E+01	8.860E+00	8.114E+00		2.503E+01	1.816E+01	5.945E+02
13.31.50	7.269E+01	7.945E+00	8.073E+00		2.501E+01	1.836E+01	5.945E+02
13.32.00	7.194E+01	7.196E+00	7.162E+00	1.698E+00	2.502E+01	1.836E+01	5.945E+02
13.32.10	6.893E+01	6.448E+00	7.327E+00	1.641E+00	2.512E+01	1.800E+01	5.933E+02
13.32.20	6.834E+01	6.240E+00	9.232E+00	1.417E+00	2.525E+01	1.768E+01	5.933E+02
13.32.30	6.778E+01	6.448E+00	9.315E+00	1.637E+00	2.533E+01	1.760E+01	5.921E+02
13.32.40	6.540E+01	6.739E+00	9.356E+00	1.541E+00	2.528E+01	1.820E+01	5.921E+02
13.32.50	6.520E+01	7.280E+00	8.404E+00	1.524E+00	2.519E+01	1.864E+01	5.921E+02
13.33.00	6.105E+01	6.739E+00	7.741E+00	1.707E+00	2.512E+01	1.888E+01	5.933E+02
13.33.10	6.075E+01	6.156E+00	8.031E+00	1.604E+00	2.502E+01	1.924E+01	5.958E+02
13.33.20	6.081E+01	7.280E+00	7.824E+00	1.830E+00	2.503E+01	1.932E+01	5.952E+02
13.33.30	6.755E+01	6.780E+00	7.369E+00	1.827E+00	2.502E+01	1.944E+01	5.939E+02
13.33.40	7.900E+01	6.281E+00	6.913E+00	1.819E+00	2.501E+01	1.948E+01	5.933E+02
13.33.50	7.956E+01	6.448E+00	7.700E+00	1.948E+00	2.502E+01	1.948E+01	5.927E+02

*Data gaps due to instrument calibration or zero drift.

TABLE B8.- Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
13.34.00	8.210E+01	7.238E+00	7.990E+00	1.738E+00	2.502E+01	1.932E+01	5.952E+02
13.34.10	7.108E+01	4.576E+00	9.853E+00		2.503E+01	1.804E+01	5.964E+02
13.34.20	6.791E+01	5.408E+00	7.245E+00	1.898E+00	2.500E+01	1.928E+01	5.952E+02
13.34.30	6.890E+01	7.030E+00	6.789E+00	1.785E+00	2.500E+01	1.928E+01	5.945E+02
13.34.40	6.897E+01	6.364E+00	6.996E+00	1.595E+00	2.502E+01	1.936E+01	5.939E+02
13.34.50	6.877E+01	5.449E+00	8.114E+00	1.838E+00	2.501E+01	1.904E+01	5.952E+02
13.35.00	6.903E+01	5.075E+00	7.659E+00	1.977E+00	2.497E+01	1.940E+01	5.964E+02
13.35.10	7.124E+01	6.780E+00	7.576E+00	1.767E+00	2.494E+01	1.952E+01	5.958E+02
13.35.20	7.147E+01	7.404E+00	6.996E+00	1.738E+00	2.492E+01	1.968E+01	5.964E+02
13.35.30	7.032E+01	8.195E+00	7.327E+00	1.726E+00	2.490E+01	1.972E+01	5.970E+02
13.35.40	6.996E+01	6.822E+00	6.706E+00	1.734E+00	2.489E+01	1.968E+01	5.964E+02
13.35.50	7.154E+01	7.030E+00	7.659E+00	1.716E+00	2.489E+01	1.948E+01	5.945E+02
13.36.00	6.715E+01	6.156E+00	6.955E+00	1.791E+00	2.489E+01	1.876E+01	5.952E+02
13.36.10	6.765E+01	7.737E+00	6.417E+00	1.976E+00	2.485E+01	1.908E+01	5.970E+02
13.36.20	6.666E+01	6.364E+00	4.678E+00	1.719E+00	2.481E+01	1.908E+01	5.952E+02
13.36.30	7.009E+01	5.990E+00	6.168E+00	1.654E+00	2.487E+01	1.912E+01	5.958E+02
13.36.40	6.745E+01	6.739E+00	5.920E+00	1.670E+00	2.486E+01	1.912E+01	5.970E+02
13.36.50	6.613E+01	6.240E+00	6.417E+00	1.574E+00	2.489E+01	1.912E+01	5.933E+02

142

APPENDIX B

TABLE B8.- Continued

(d) Spiral at E

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
13.47.20	5.474E+01	8.028E+00	1.279E+01		2.668E+01	1.708E+01	1.387E+02
13.47.30	5.332E+01	7.238E+00	1.242E+01		2.639E+01	2.276E+01	1.607E+02
13.47.40	5.316E+01	6.531E+00	1.279E+01		2.620E+01	2.244E+01	1.961E+02
13.47.50	5.643E+01	5.158E+00	1.233E+01		2.631E+01	2.180E+01	2.254E+02
13.48.00	6.157E+01	7.196E+00	9.397E+00		2.687E+01	2.100E+01	2.542E+02
13.48.10	6.619E+01	6.281E+00	8.238E+00		2.742E+01	2.020E+01	2.835E+02
13.48.20	6.936E+01	6.988E+00	7.783E+00		2.734E+01	2.000E+01	3.128E+02
13.48.30	6.553E+01	6.032E+00	8.569E+00		2.694E+01	2.008E+01	3.428E+02
13.48.40	6.897E+01	6.323E+00	8.073E+00		2.668E+01	2.008E+01	3.752E+02
13.48.50	6.969E+01	5.324E+00	6.748E+00		2.649E+01	1.992E+01	4.051E+02
13.49.00	6.616E+01	4.659E+00	6.127E+00		2.642E+01	1.964E+01	4.363E+02
13.49.10	6.613E+01	5.824E+00	6.458E+00		2.629E+01	1.948E+01	4.668E+02
13.49.20	6.735E+01	7.529E+00	6.417E+00		2.612E+01	1.880E+01	4.974E+02
13.49.30	6.550E+01	7.945E+00	5.299E+00		2.596E+01	1.828E+01	5.255E+02
13.49.40	6.751E+01	6.697E+00	5.547E+00		2.577E+01	1.780E+01	5.567E+02
13.49.50	6.877E+01	5.948E+00	5.713E+00		2.553E+01	1.744E+01	5.890E+02
13.50.00	7.147E+01	6.614E+00	6.541E+00		2.525E+01	1.524E+01	6.220E+02
13.50.10	7.764E+01	6.406E+00	6.831E+00		2.493E+01	1.604E+01	6.526E+02
13.50.20	7.497E+01	5.782E+00	6.251E+00		2.461E+01	1.868E+01	6.825E+02
13.50.30	7.161E+01	8.028E+00	7.617E+00		2.429E+01	1.864E+01	7.149E+02
13.50.40	7.246E+01	7.862E+00	4.885E+00		2.397E+01	1.872E+01	7.455E+02
13.50.50	6.679E+01	8.361E+00	6.417E+00		2.367E+01	1.872E+01	7.748E+02
13.51.00	5.567E+01	9.568E+00	1.121E+01		2.341E+01	1.872E+01	8.048E+02
13.51.10	4.643E+01	1.094E+01	2.219E+01		2.317E+01	1.852E+01	8.323E+02
13.51.20	6.415E+01	6.489E+00	1.966E+01		2.300E+01	1.816E+01	8.591E+02
13.51.30	6.979E+01	5.491E+00	1.324E+01		2.303E+01	1.700E+01	8.860E+02
13.51.40	7.131E+01	8.153E+00	1.105E+01		2.294E+01	1.596E+01	9.196E+02
13.51.50	6.359E+01	7.904E+00	1.117E+01		2.275E+01	1.628E+01	9.441E+02
13.52.00	6.349E+01	7.363E+00	9.977E+00		2.253E+01	1.652E+01	9.704E+02
13.52.10	6.593E+01	6.988E+00	8.487E+00		2.236E+01	1.628E+01	9.985E+02
13.52.20	6.095E+01	5.200E+00	6.665E+00		2.217E+01	1.620E+01	1.026E+03
13.52.30	6.438E+01	5.740E+00	5.547E+00		2.194E+01	1.616E+01	1.052E+03
13.52.40	6.382E+01	4.659E+00	5.796E+00		2.169E+01	1.608E+01	1.081E+03
13.52.50	6.705E+01	5.532E+00	5.671E+00		2.142E+01	1.612E+01	1.109E+03
13.53.00	6.788E+01	5.241E+00	5.671E+00		2.120E+01	1.612E+01	1.134E+03
13.53.10	6.675E+01	5.241E+00	4.222E+00		2.101E+01	1.600E+01	1.158E+03
13.53.20	6.468E+01	4.908E+00	4.181E+00		2.079E+01	1.612E+01	1.184E+03
13.53.30	6.649E+01	5.241E+00	5.257E+00		2.056E+01	1.608E+01	1.212E+03
13.53.40	6.933E+01	7.280E+00	5.216E+00		2.041E+01	1.568E+01	1.239E+03
13.53.50	6.916E+01	6.406E+00	4.678E+00		2.023E+01	1.416E+01	1.269E+03
13.54.00	6.765E+01	6.614E+00	7.203E+00		2.006E+01	1.536E+01	1.294E+03
13.54.10	6.695E+01	6.780E+00	8.280E+00		1.993E+01	1.492E+01	1.324E+03
13.54.20	6.844E+01	6.739E+00	8.114E+00		1.983E+01	1.428E+01	1.354E+03
13.54.30	7.098E+01	5.865E+00	6.541E+00		1.974E+01	1.380E+01	1.382E+03
13.54.40	7.029E+01	5.990E+00	7.369E+00		1.960E+01	1.368E+01	1.408E+03
13.54.50	7.174E+01	6.364E+00	7.245E+00		1.950E+01	1.320E+01	1.434E+03
13.55.00	7.141E+01	6.115E+00	7.369E+00		1.946E+01	1.212E+01	1.461E+03
13.55.10	7.388E+01	6.406E+00	6.996E+00		1.922E+01	1.216E+01	1.486E+03
13.55.20	7.388E+01	5.699E+00	7.493E+00		1.898E+01	1.208E+01	1.514E+03
13.55.30	7.560E+01	6.656E+00	6.831E+00		1.876E+01	9.760E+00	1.543E+03
13.55.40	7.418E+01	5.907E+00	6.499E+00		1.876E+01	1.180E+01	1.539E+03

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- Continued

(e) Leg E → F

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	T, °C	T _{dp} , °C	h, m
14.03.00	8.273E+01	3.868E+00	8.321E+00	1.937E+00	2.603E+01	1.816E+01	5.909E+02
14.03.10	8.250E+01	3.577E+00	6.044E+00	2.415E+00	2.586E+01	1.652E+01	6.007E+02
14.03.20	8.355E+01	5.491E+00	3.891E+00	1.689E+00	2.577E+01	1.812E+01	5.988E+02
14.03.30	8.071E+01	5.824E+00	3.808E+00	1.904E+00	2.576E+01	1.784E+01	5.964E+02
14.03.40	8.058E+01	6.531E+00	4.636E+00	1.963E+00	2.571E+01	1.776E+01	5.964E+02
14.03.50	7.213E+01	7.030E+00	4.554E+00	2.013E+00	2.550E+01	1.844E+01	5.988E+02
14.04.00	6.378E+01	5.200E+00	4.015E+00	2.083E+00	2.548E+01	1.824E+01	5.976E+02
14.04.10	6.708E+01	6.156E+00	4.098E+00	2.000E+00	2.554E+01	1.764E+01	5.982E+02
14.04.20	6.791E+01	6.406E+00	4.140E+00	2.031E+00	2.551E+01	1.764E+01	6.000E+02
14.04.30	7.230E+01	7.737E+00	5.133E+00	1.977E+00	2.548E+01	1.780E+01	5.976E+02
14.04.40	6.949E+01	8.236E+00	5.506E+00	2.018E+00	2.545E+01	1.776E+01	5.994E+02
14.04.50	7.111E+01	7.696E+00	5.920E+00	2.031E+00	2.539E+01	1.796E+01	6.019E+02
14.05.00	7.207E+01	7.654E+00	6.210E+00	2.069E+00	2.536E+01	1.800E+01	6.019E+02
14.05.10	6.920E+01	9.068E+00	5.796E+00	2.004E+00	2.539E+01	1.808E+01	6.000E+02
14.05.20	6.860E+01	5.782E+00	5.961E+00	1.936E+00	2.537E+01	1.796E+01	6.007E+02
14.05.30	6.850E+01	6.198E+00	5.837E+00	1.929E+00	2.534E+01	1.768E+01	6.019E+02
14.05.40	6.765E+01	5.491E+00	6.003E+00	1.931E+00	2.528E+01	1.764E+01	6.013E+02
14.05.50	6.672E+01	5.116E+00	4.678E+00	1.921E+00	2.521E+01	1.784E+01	6.031E+02
14.06.00	6.751E+01	6.656E+00	4.802E+00	1.910E+00	2.518E+01	1.780E+01	6.043E+02
14.06.10	6.444E+01	5.740E+00	4.968E+00	1.905E+00	2.517E+01	1.788E+01	6.025E+02
14.06.20	6.398E+01	8.569E+00	4.636E+00	1.964E+00	2.518E+01	1.784E+01	6.025E+02
14.06.30	6.372E+01	6.240E+00	4.761E+00	1.934E+00	2.513E+01	1.808E+01	6.037E+02
14.06.40	6.468E+01	4.867E+00	4.719E+00	1.896E+00	2.511E+01	1.828E+01	6.013E+02
14.06.50	6.263E+01	5.075E+00	3.767E+00	1.904E+00	2.505E+01	1.836E+01	6.037E+02
14.07.00	6.402E+01	7.280E+00	4.802E+00	1.969E+00	2.501E+01	1.860E+01	6.031E+02
14.07.10	6.289E+01	6.281E+00	5.713E+00	1.928E+00	2.495E+01	1.888E+01	6.037E+02
14.07.20	6.425E+01	6.032E+00	5.630E+00	1.947E+00	2.492E+01	1.908E+01	6.019E+02
14.07.30	6.174E+01	6.364E+00	7.245E+00	1.829E+00	2.488E+01	1.904E+01	6.049E+02
14.07.40	6.260E+01	5.740E+00	4.926E+00	1.913E+00	2.488E+01	1.912E+01	6.037E+02
14.07.50	6.035E+01	5.657E+00	4.885E+00	1.902E+00	2.483E+01	1.940E+01	6.037E+02
14.08.00	6.560E+01	6.115E+00	4.429E+00	1.838E+00	2.476E+01	1.964E+01	6.043E+02
14.08.10	6.963E+01	5.824E+00	4.554E+00	1.957E+00	2.478E+01	1.956E+01	6.043E+02
14.08.20	7.349E+01	4.700E+00	5.050E+00	2.013E+00	2.477E+01	1.960E+01	6.037E+02
14.08.30	7.474E+01	6.281E+00	4.512E+00	1.993E+00	2.476E+01	1.964E+01	6.025E+02
14.08.40	7.454E+01	5.532E+00	4.885E+00	1.964E+00	2.476E+01	1.964E+01	6.025E+02
14.08.50	7.022E+01	6.032E+00	5.216E+00	1.925E+00	2.474E+01	1.964E+01	6.025E+02
14.09.00	7.725E+01	8.736E+00	7.369E+00	1.990E+00	2.471E+01	1.968E+01	6.043E+02
14.09.10	7.467E+01	6.156E+00	6.996E+00	1.873E+00	2.471E+01	1.964E+01	6.043E+02
14.09.20	7.174E+01	6.364E+00	4.926E+00	1.924E+00	2.473E+01	1.964E+01	6.037E+02
14.09.30	7.273E+01	8.611E+00	6.913E+00	1.926E+00	2.475E+01	1.960E+01	6.031E+02
14.09.40	7.464E+01	5.824E+00	8.114E+00	1.919E+00	2.473E+01	1.956E+01	6.037E+02
14.09.50	7.121E+01	6.614E+00	6.789E+00	1.985E+00	2.474E+01	1.968E+01	6.019E+02
14.10.00	7.920E+01	8.528E+00	6.127E+00	1.988E+00	2.476E+01	1.972E+01	6.007E+02
14.10.10	7.867E+01	5.782E+00	5.837E+00	1.956E+00	2.480E+01	1.972E+01	5.970E+02
14.10.20	6.609E+01	6.364E+00	5.837E+00	1.998E+00	2.470E+01	1.972E+01	6.037E+02
14.10.30	5.511E+01	9.859E+00	1.047E+01	1.924E+00	2.473E+01	1.956E+01	6.019E+02
14.10.40	6.458E+01	8.611E+00	1.001E+01	1.924E+00	2.474E+01	1.916E+01	6.025E+02
14.10.50	6.573E+01	6.905E+00	8.611E+00	1.778E+00	2.482E+01	1.880E+01	6.031E+02
14.11.00	6.972E+01	5.449E+00	9.066E+00	1.823E+00	2.481E+01	1.896E+01	6.031E+02
14.11.10	6.880E+01	4.992E+00	9.770E+00	1.879E+00	2.478E+01	1.916E+01	6.031E+02

APPENDIX B

TABLE B8.- Continued

(e) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
14.11.20	6.834E+01	6.073E+00	9.397E+00	1.840E+00	2.479E+01	1.916E+01	6.019E+02
14.11.30	6.761E+01	5.116E+00	7.990E+00	1.876E+00	2.485E+01	1.868E+01	6.019E+02
14.11.40	6.920E+01	5.616E+00	8.238E+00	1.853E+00	2.493E+01	1.816E+01	6.025E+02
14.11.50	6.943E+01	4.825E+00	8.776E+00	1.853E+00	2.495E+01	1.808E+01	6.019E+02
14.12.00	6.864E+01	6.822E+00	7.245E+00	1.832E+00	2.496E+01	1.804E+01	6.013E+02
14.12.10	6.910E+01	7.779E+00	6.541E+00	1.784E+00	2.498E+01	1.776E+01	6.019E+02
14.12.20	6.840E+01	6.364E+00	6.375E+00	1.865E+00	2.502E+01	1.764E+01	6.019E+02
14.12.30	6.837E+01	5.907E+00	5.547E+00	1.825E+00	2.504E+01	1.516E+01	6.019E+02
14.12.40	6.718E+01	7.196E+00	7.286E+00		2.503E+01	1.128E+01	6.055E+02
14.12.50	6.560E+01	8.028E+00	7.327E+00		2.505E+01	1.360E+01	6.025E+02
14.13.00	6.996E+01	4.492E+00	5.506E+00		2.505E+01	1.792E+01	6.013E+02
14.13.10	7.180E+01	3.411E+00	6.582E+00		2.499E+01	1.788E+01	6.013E+02
14.13.20	6.864E+01	6.572E+00	7.741E+00		2.503E+01	1.764E+01	6.007E+02
14.13.30	6.801E+01	6.656E+00	6.375E+00	1.786E+00	2.504E+01	1.768E+01	6.007E+02
14.13.40	6.860E+01	8.028E+00	5.920E+00	1.832E+00	2.491E+01	1.820E+01	6.007E+02
14.13.50	7.415E+01	7.072E+00	5.961E+00	1.817E+00	2.492E+01	1.816E+01	6.019E+02
14.14.00	7.342E+01	6.988E+00	5.671E+00	1.748E+00	2.494E+01	1.812E+01	6.013E+02
14.14.10	7.316E+01	5.033E+00	6.872E+00	1.826E+00	2.491E+01	1.848E+01	6.007E+02
14.14.20	7.342E+01	5.532E+00	6.044E+00	1.773E+00	2.486E+01	1.876E+01	5.994E+02
14.14.30	7.395E+01	5.948E+00	7.866E+00	1.801E+00	2.483E+01	1.876E+01	6.019E+02
14.14.40	7.533E+01	6.905E+00	7.907E+00	1.821E+00	2.479E+01	1.912E+01	6.019E+02
14.14.50	7.467E+01	5.740E+00	6.003E+00	1.813E+00	2.469E+01	1.960E+01	6.013E+02
14.15.00	7.854E+01	6.364E+00	5.257E+00	1.823E+00	2.467E+01	1.976E+01	6.000E+02
14.15.10	7.698E+01	5.075E+00	5.713E+00		2.469E+01	1.968E+01	5.994E+02
14.15.20	7.764E+01	5.990E+00	5.796E+00		2.467E+01	1.960E+01	6.013E+02
14.15.30	7.995E+01	5.408E+00	7.038E+00		2.457E+01	1.956E+01	6.080E+02
14.15.40	7.629E+01	7.904E+00	8.735E+00		2.467E+01	1.976E+01	5.958E+02
14.15.50	7.593E+01	5.657E+00	7.948E+00		2.459E+01	1.972E+01	6.031E+02
14.16.00	7.791E+01	4.243E+00	7.783E+00		2.464E+01	1.960E+01	6.013E+02
14.16.10	7.949E+01	7.030E+00	8.031E+00		2.464E+01	1.968E+01	6.000E+02
14.16.20	7.715E+01	7.196E+00	8.983E+00		2.458E+01	1.968E+01	6.019E+02
14.16.30	7.764E+01	5.532E+00	8.404E+00		2.461E+01	1.964E+01	6.013E+02
14.16.40	7.860E+01	8.278E+00	8.404E+00	1.742E+00	2.463E+01	1.964E+01	6.007E+02
14.16.50	7.824E+01	5.366E+00	8.487E+00	1.784E+00	2.464E+01	1.952E+01	6.025E+02
14.17.00	7.873E+01	6.489E+00	8.818E+00	1.777E+00	2.465E+01	1.956E+01	6.031E+02
14.17.10	8.055E+01	5.283E+00	6.748E+00	1.856E+00	2.467E+01	1.952E+01	6.013E+02
14.17.20	7.939E+01	5.616E+00	6.872E+00	1.734E+00	2.470E+01	1.948E+01	6.000E+02
14.17.30	7.999E+01	7.904E+00	8.073E+00	1.775E+00	2.468E+01	1.948E+01	6.013E+02
14.17.40	7.857E+01	7.779E+00	5.754E+00	1.811E+00	2.470E+01	1.944E+01	6.013E+02
14.17.50	8.332E+01	7.113E+00	4.802E+00	1.768E+00	2.471E+01	1.944E+01	6.019E+02
14.18.00	7.956E+01	7.238E+00	4.761E+00	1.707E+00	2.468E+01	1.944E+01	6.025E+02
14.18.10	8.207E+01	9.193E+00	5.257E+00	1.729E+00	2.470E+01	1.944E+01	6.013E+02
14.18.20	8.098E+01	6.988E+00	5.133E+00	1.705E+00	2.473E+01	1.936E+01	6.007E+02
14.18.30	8.121E+01	6.198E+00	5.671E+00	1.726E+00	2.467E+01	1.944E+01	6.025E+02
14.18.40	7.992E+01	7.612E+00	6.831E+00	1.786E+00	2.465E+01	1.944E+01	6.025E+02
14.18.50	8.411E+01	8.112E+00	7.617E+00	1.793E+00	2.465E+01	1.944E+01	6.019E+02
14.19.00	8.085E+01	7.321E+00	6.168E+00	1.810E+00	2.462E+01	1.944E+01	6.025E+02
14.19.10	7.566E+01	7.113E+00	6.706E+00	1.856E+00	2.458E+01	1.952E+01	6.031E+02
14.19.20	7.187E+01	7.321E+00	6.458E+00	1.795E+00	2.458E+01	1.956E+01	6.025E+02
14.19.30	7.335E+01	6.364E+00	6.582E+00		2.464E+01	1.760E+01	6.031E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B8.- Continued

(e) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
14.19.40	7.491E+01	7.612E+00	8.031E+00		2.468E+01	1.736E+01	6.025E+02
14.19.50	7.599E+01	6.614E+00	6.499E+00		2.470E+01	1.948E+01	6.019E+02
14.20.00	7.088E+01	7.987E+00	7.452E+00		2.470E+01	1.952E+01	6.019E+02
14.20.10	7.296E+01	6.947E+00	7.948E+00	1.791E+00	2.471E+01	1.952E+01	6.013E+02
14.20.20	7.114E+01	7.280E+00	6.831E+00	1.736E+00	2.470E+01	1.960E+01	6.013E+02
14.20.30	7.035E+01	8.153E+00	7.659E+00	1.768E+00	2.467E+01	1.964E+01	6.019E+02
14.20.40	6.844E+01	4.700E+00	6.582E+00	1.770E+00	2.469E+01	1.948E+01	6.007E+02
14.20.50	6.943E+01	5.075E+00	7.410E+00		2.471E+01	1.828E+01	6.007E+02
14.21.00	6.850E+01	5.158E+00	7.741E+00		2.468E+01	1.908E+01	6.019E+02
14.21.10	7.025E+01	8.611E+00	6.955E+00		2.464E+01	1.944E+01	6.025E+02
14.21.20	7.035E+01	8.236E+00	7.327E+00	1.773E+00	2.467E+01	1.944E+01	6.013E+02
14.21.30	6.867E+01	7.737E+00	6.665E+00	1.793E+00	2.465E+01	1.944E+01	6.031E+02
14.21.40	6.966E+01	9.443E+00	4.968E+00	1.829E+00	2.465E+01	1.948E+01	6.031E+02
14.21.50	6.903E+01	8.860E+00	5.796E+00	1.765E+00	2.465E+01	1.944E+01	6.019E+02
14.22.00	7.111E+01	7.155E+00	7.534E+00	1.705E+00	2.464E+01	1.948E+01	6.013E+02
14.22.10	6.883E+01	4.409E+00	7.410E+00	1.781E+00	2.462E+01	1.952E+01	6.013E+02
14.22.20	6.857E+01	4.492E+00	6.996E+00	1.846E+00	2.457E+01	1.960E+01	6.031E+02
14.22.30	6.580E+01	6.572E+00	6.251E+00	1.728E+00	2.456E+01	1.928E+01	6.025E+02
14.22.40	6.623E+01	3.619E+00	6.665E+00	1.883E+00	2.457E+01	1.960E+01	6.019E+02
14.22.50	6.768E+01	5.740E+00	5.796E+00	1.818E+00	2.460E+01	1.964E+01	6.013E+02
14.23.00	6.689E+01	6.406E+00	6.375E+00	1.811E+00	2.462E+01	1.960E+01	6.007E+02
14.23.10	6.715E+01	4.950E+00	6.334E+00	1.864E+00	2.463E+01	1.964E+01	6.013E+02
14.23.20	6.639E+01	2.828E+00	7.452E+00	1.857E+00	2.463E+01	1.968E+01	6.013E+02
14.23.30	6.718E+01	5.324E+00	7.410E+00	1.798E+00	2.463E+01	1.968E+01	6.019E+02
14.23.40	6.781E+01	5.200E+00	7.038E+00	1.918E+00	2.465E+01	1.944E+01	6.013E+02
14.23.50	6.636E+01	6.156E+00	5.713E+00	2.029E+00	2.464E+01	1.968E+01	6.019E+02
14.24.00	6.801E+01	6.406E+00	7.948E+00	1.746E+00	2.464E+01	1.964E+01	6.019E+02
14.24.10	6.824E+01	6.240E+00	9.356E+00	1.754E+00	2.467E+01	1.944E+01	6.019E+02
14.24.20	6.738E+01	5.865E+00	1.006E+01	1.814E+00	2.470E+01	1.904E+01	6.000E+02

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B8.- Continued

(f) Spiral at B

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{ap} , °C	h, m
14.51.00	5.907E+01	8.611E+00	6.210E+00		2.698E+01	2.408E+01	1.912E+02
14.51.10	5.692E+01	9.360E+00	7.617E+00		2.663E+01	2.312E+01	2.303E+02
14.51.20	6.062E+01	8.112E+00	9.066E+00		2.623E+01	2.332E+01	2.646E+02
14.51.30	6.058E+01	9.443E+00	9.687E+00		2.599E+01	2.360E+01	2.939E+02
14.51.40	6.141E+01	9.942E+00	8.735E+00		2.592E+01	2.288E+01	3.251E+02
14.51.50	6.514E+01	1.044E+01	6.582E+00	1.636E+00	2.587E+01	2.240E+01	3.544E+02
14.52.00	6.689E+01	8.195E+00	6.168E+00	1.621E+00	2.555E+01	2.280E+01	3.825E+02
14.52.10	6.583E+01	7.072E+00	4.843E+00	1.676E+00	2.535E+01	2.248E+01	4.124E+02
14.52.20	6.718E+01	6.032E+00	3.726E+00	1.701E+00	2.606E+01	2.036E+01	4.338E+02
14.52.30	8.355E+01	7.737E+00	6.624E+00	1.792E+00	2.544E+01	2.100E+01	4.619E+02
14.52.40	7.801E+01	6.198E+00	7.203E+00	1.731E+00	2.573E+01	2.000E+01	4.937E+02
14.52.50	8.223E+01	7.862E+00	8.362E+00	1.534E+00	2.565E+01	1.968E+01	5.218E+02
14.53.00	8.725E+01	8.195E+00	7.948E+00	1.399E+00	2.550E+01	1.948E+01	5.542E+02
14.53.10	8.101E+01	6.864E+00	7.079E+00	1.521E+00	2.525E+01	1.948E+01	5.835E+02
14.53.20	7.758E+01	5.241E+00	7.907E+00	1.554E+00	2.497E+01	1.936E+01	6.135E+02
14.53.30	7.956E+01	5.033E+00	8.942E+00		2.466E+01	1.852E+01	6.471E+02
14.53.40	7.626E+01	4.992E+00	7.741E+00		2.436E+01	1.932E+01	6.807E+02
14.53.50	7.685E+01	7.904E+00	6.913E+00	1.522E+00	2.414E+01	1.924E+01	7.125E+02
14.54.00	7.520E+01	8.736E+00	6.044E+00	1.539E+00	2.394E+01	1.908E+01	7.424E+02
14.54.10	7.530E+01	1.177E+01	6.913E+00	1.548E+00	2.383E+01	1.860E+01	7.718E+02
14.54.20	7.025E+01	7.488E+00	7.700E+00	1.603E+00	2.370E+01	1.836E+01	7.999E+02
14.54.30	7.091E+01	8.486E+00	7.783E+00	1.512E+00	2.353E+01	1.792E+01	8.286E+02
14.54.40	7.002E+01	1.006E+01	7.866E+00	1.408E+00	2.337E+01	1.716E+01	8.591E+02
14.54.50	7.487E+01	9.276E+00	7.783E+00	1.421E+00	2.320E+01	1.636E+01	8.909E+02
14.55.00	7.692E+01	6.323E+00	6.996E+00	1.439E+00	2.307E+01	1.564E+01	9.160E+02
14.55.10	8.019E+01	7.612E+00	6.003E+00		2.295E+01	1.488E+01	9.404E+02
14.55.20	7.603E+01	6.364E+00	7.120E+00		2.279E+01	1.528E+01	9.661E+02
14.55.30	7.698E+01	6.115E+00	6.375E+00		2.253E+01	1.532E+01	9.954E+02
14.55.40	7.580E+01	5.990E+00	6.417E+00		2.224E+01	1.492E+01	1.026E+03
14.55.50	7.728E+01	6.905E+00	4.843E+00		2.207E+01	1.452E+01	1.054E+03
14.56.00	7.527E+01	6.739E+00	2.649E+00		2.196E+01	1.468E+01	1.076E+03
14.56.10	7.405E+01	7.446E+00	4.761E+00	1.511E+00	2.181E+01	1.460E+01	1.098E+03
14.56.20	6.890E+01	4.950E+00	6.127E+00	1.603E+00	2.160E+01	1.488E+01	1.126E+03
14.56.30	7.606E+01	7.196E+00	5.878E+00	1.616E+00	2.137E+01	1.480E+01	1.154E+03
14.56.40	8.019E+01	8.278E+00	6.334E+00	1.549E+00	2.125E+01	1.452E+01	1.178E+03
14.56.50	7.339E+01	7.737E+00	7.907E+00	1.407E+00	2.123E+01	1.424E+01	1.203E+03
14.57.00	7.382E+01	8.736E+00	9.356E+00	1.467E+00	2.099E+01	1.420E+01	1.233E+03
14.57.10	7.913E+01	9.692E+00	9.646E+00	1.534E+00	2.071E+01	1.420E+01	1.263E+03
14.57.20	7.939E+01	6.364E+00	9.315E+00	1.620E+00	2.037E+01	1.408E+01	1.294E+03
14.57.30	7.916E+01	7.446E+00	8.445E+00	1.594E+00	2.008E+01	1.372E+01	1.327E+03
14.57.40	7.372E+01	5.449E+00	7.948E+00	1.576E+00	1.973E+01	1.356E+01	1.362E+03
14.57.50	7.227E+01	6.240E+00	9.439E+00	1.652E+00	1.936E+01	1.352E+01	1.397E+03
14.58.00	7.019E+01	6.947E+00	8.776E+00	1.664E+00	1.920E+01	1.268E+01	1.432E+03
14.58.10	6.979E+01	5.574E+00	7.245E+00	1.562E+00	1.898E+01	1.212E+01	1.467E+03
14.58.20	6.474E+01	8.070E+00	4.719E+00	1.647E+00	1.874E+01	1.164E+01	1.501E+03
14.58.30	6.501E+01	9.360E+00	5.216E+00	1.734E+00	1.861E+01	1.108E+01	1.532E+03
14.58.40	6.616E+01	5.782E+00	3.519E+00	1.679E+00	1.858E+01	1.104E+01	1.543E+03
14.58.50	6.669E+01	7.696E+00	6.210E+00		1.906E+01	1.016E+01	1.502E+03
14.59.00	6.652E+01	7.737E+00	7.617E+00		1.952E+01	1.152E+01	1.457E+03

*Data gaps due to instrument calibration or zero drift.

APPENDIX B

TABLE B8.- Continued

(g) Leg B → A

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
15.05.50	7.395E+01	9.068E+00	5.837E+00		2.538E+01	1.940E+01	6.086E+02
15.06.00	7.599E+01	8.736E+00	6.541E+00		2.535E+01	1.932E+01	6.129E+02
15.06.10	7.451E+01	8.070E+00	6.996E+00		2.537E+01	1.932E+01	6.117E+02
15.06.20	7.715E+01	3.494E+00	5.589E+00		2.545E+01	1.920E+01	6.104E+02
15.06.30	7.563E+01	6.614E+00	6.210E+00		2.539E+01	1.928E+01	6.117E+02
15.06.40	7.834E+01	6.988E+00	6.831E+00		2.531E+01	1.928E+01	6.117E+02
15.06.50	7.725E+01	6.614E+00	5.837E+00		2.518E+01	1.932E+01	6.117E+02
15.07.00	7.735E+01	7.446E+00	4.678E+00		2.506E+01	1.932E+01	6.153E+02
15.07.10	8.157E+01	7.488E+00	4.761E+00		2.503E+01	1.924E+01	6.129E+02
15.07.20	8.504E+01	6.697E+00	7.369E+00		2.505E+01	1.936E+01	6.159E+02
15.07.30	7.755E+01	9.443E+00	9.108E+00		2.523E+01	1.936E+01	6.110E+02
15.07.40	7.431E+01	5.408E+00	6.334E+00		2.514E+01	1.940E+01	6.098E+02
15.07.50	7.692E+01	6.822E+00	5.547E+00		2.500E+01	1.936E+01	6.153E+02
15.08.00	8.306E+01	6.364E+00	4.761E+00		2.521E+01	1.920E+01	6.135E+02
15.08.10	7.349E+01	7.571E+00	5.423E+00		2.515E+01	1.940E+01	6.117E+02
15.08.20	7.606E+01	3.536E+00	5.754E+00		2.539E+01	1.880E+01	6.129E+02
15.08.30	7.002E+01	5.948E+00	4.678E+00		2.554E+01	1.856E+01	6.092E+02
15.08.40	6.827E+01	5.200E+00	6.127E+00		2.536E+01	1.892E+01	6.123E+02
15.08.50	6.992E+01	2.828E+00	7.700E+00		2.504E+01	1.936E+01	6.165E+02
15.09.00	8.365E+01	6.572E+00	7.327E+00		2.537E+01	1.872E+01	6.129E+02
15.09.10	6.877E+01	4.867E+00	7.741E+00		2.550E+01	1.856E+01	6.104E+02
15.09.20	7.448E+01	4.617E+00	8.114E+00		2.548E+01	1.860E+01	6.110E+02
15.09.30	7.269E+01	3.328E+00	5.796E+00		2.546E+01	1.860E+01	6.147E+02
15.09.40	7.045E+01	5.283E+00	4.719E+00		2.550E+01	1.864E+01	6.135E+02
15.09.50	7.137E+01	7.862E+00	5.837E+00		2.557E+01	1.860E+01	6.104E+02
15.10.00	6.916E+01	6.822E+00	5.423E+00		2.543E+01	1.872E+01	6.117E+02
15.10.10	6.989E+01	6.822E+00	5.299E+00		2.539E+01	1.880E+01	6.129E+02
15.10.20	7.368E+01	5.657E+00	6.541E+00		2.530E+01	1.900E+01	6.147E+02
15.10.30	7.213E+01	4.368E+00	6.292E+00		2.542E+01	1.872E+01	6.129E+02
15.10.40	7.101E+01	6.448E+00	6.499E+00		2.532E+01	1.896E+01	6.135E+02
15.10.50	6.999E+01	7.904E+00	5.092E+00		2.545E+01	1.848E+01	6.135E+02
15.11.00	7.098E+01	9.526E+00	2.815E+00		2.543E+01	1.876E+01	6.117E+02
15.11.10	7.147E+01	8.070E+00	5.175E+00		2.549E+01	1.860E+01	6.147E+02
15.11.20	7.309E+01	6.864E+00	6.996E+00		2.555E+01	1.856E+01	6.135E+02
15.11.30	7.603E+01	6.531E+00	6.955E+00		2.547E+01	1.872E+01	6.129E+02
15.11.40	7.484E+01	7.238E+00	5.920E+00		2.554E+01	1.864E+01	6.129E+02
15.11.50	7.702E+01	5.740E+00	4.843E+00		2.567E+01	1.832E+01	6.135E+02
15.12.00	7.484E+01	8.236E+00	6.210E+00		2.564E+01	1.844E+01	6.129E+02
15.12.10	7.642E+01	4.742E+00	5.464E+00		2.549E+01	1.896E+01	6.123E+02
15.12.20	7.943E+01	5.449E+00	4.843E+00		2.581E+01	1.828E+01	6.049E+02
15.12.30	7.642E+01	5.740E+00	7.327E+00		2.567E+01	1.804E+01	6.208E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- Continued

(h) Leg K → L

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.22.00	6.147E+01	1.189E+01	4.678E+00		2.612E+01	2.068E+01	6.202E+02
18.22.10	6.190E+01	9.276E+00	5.506E+00		2.589E+01	2.160E+01	6.239E+02
18.22.20	5.943E+01	9.484E+00	5.423E+00		2.590E+01	2.164E+01	6.159E+02
18.22.30	6.029E+01	9.235E+00	5.754E+00		2.598E+01	2.012E+01	6.190E+02
18.22.40	6.144E+01	1.098E+01	5.299E+00		2.619E+01	1.968E+01	6.159E+02
18.22.50	6.411E+01	1.056E+01	6.955E+00		2.605E+01	2.016E+01	6.196E+02
18.23.00	6.309E+01	9.443E+00	6.499E+00		2.595E+01	2.076E+01	6.190E+02
18.23.10	6.491E+01	1.081E+01	6.417E+00		2.599E+01	2.108E+01	6.178E+02
18.23.20	6.270E+01	1.019E+01	6.085E+00		2.595E+01	2.152E+01	6.214E+02
18.23.30	6.098E+01	8.860E+00	6.417E+00		2.602E+01	2.120E+01	6.129E+02
18.23.40	6.012E+01	8.569E+00	6.706E+00		2.592E+01	2.108E+01	6.190E+02
18.23.50	6.019E+01	9.235E+00	6.292E+00		2.591E+01	2.084E+01	6.233E+02
18.24.00	6.065E+01	9.692E+00	6.168E+00		2.601E+01	2.060E+01	6.196E+02
18.24.10	6.062E+01	8.860E+00	5.216E+00		2.611E+01	2.024E+01	6.172E+02
18.24.20	6.177E+01	9.568E+00	4.595E+00		2.594E+01	2.096E+01	6.214E+02
18.24.30	6.015E+01	9.651E+00	4.926E+00		2.604E+01	2.104E+01	6.184E+02
18.24.40	6.233E+01	1.119E+01	4.057E+00		2.606E+01	2.108E+01	6.184E+02
18.24.50	5.979E+01	8.985E+00	3.726E+00		2.598E+01	2.152E+01	6.202E+02
18.25.00	5.798E+01	9.900E+00	3.891E+00		2.602E+01	2.120E+01	6.153E+02
18.25.10	6.072E+01	9.443E+00	3.560E+00		2.605E+01	2.088E+01	6.159E+02
18.25.20	6.200E+01	8.112E+00	3.270E+00		2.597E+01	2.132E+01	6.239E+02
18.25.30	6.101E+01	9.568E+00	3.229E+00		2.607E+01	2.116E+01	6.165E+02
18.25.40	6.062E+01	8.569E+00	4.595E+00		2.610E+01	2.108E+01	6.208E+02
18.25.50	6.316E+01	8.860E+00	5.961E+00		2.615E+01	2.128E+01	6.178E+02
18.26.00	6.633E+01	9.984E+00	6.210E+00		2.614E+01	2.104E+01	6.172E+02
18.26.10	6.435E+01	8.486E+00	4.885E+00		2.618E+01	2.080E+01	6.159E+02
18.26.20	6.388E+01	9.692E+00	4.802E+00		2.614E+01	2.080E+01	6.172E+02
18.26.30	6.781E+01	1.123E+01	4.926E+00		2.611E+01	2.088E+01	6.178E+02
18.26.40	6.702E+01	9.027E+00	3.974E+00		2.606E+01	2.080E+01	6.159E+02
18.26.50	6.435E+01	7.945E+00	4.843E+00		2.595E+01	2.080E+01	6.214E+02
18.27.00	6.778E+01	9.859E+00	4.471E+00		2.595E+01	2.072E+01	6.214E+02
18.27.10	6.751E+01	7.987E+00	4.015E+00		2.596E+01	2.068E+01	6.227E+02
18.27.20	6.827E+01	9.110E+00	4.761E+00		2.590E+01	2.088E+01	6.214E+02
18.27.30	6.728E+01	7.987E+00	4.678E+00		2.587E+01	2.096E+01	6.220E+02
18.27.40	6.517E+01	8.860E+00	4.388E+00		2.584E+01	2.100E+01	6.220E+02
18.27.50	6.477E+01	8.112E+00	4.264E+00		2.582E+01	2.112E+01	6.239E+02
18.28.00	6.402E+01	9.734E+00	4.264E+00		2.579E+01	2.088E+01	6.214E+02
18.28.10	6.286E+01	8.444E+00	4.678E+00		2.575E+01	2.104E+01	6.227E+02
18.28.20	6.435E+01	9.526E+00	3.808E+00		2.561E+01	2.116E+01	6.269E+02
18.28.30	6.230E+01	8.860E+00	4.098E+00		2.564E+01	2.100E+01	6.245E+02
18.28.40	6.359E+01	7.737E+00	4.181E+00		2.567E+01	2.080E+01	6.214E+02
18.28.50	6.474E+01	7.945E+00	4.264E+00		2.582E+01	2.096E+01	6.068E+02
18.29.00	6.765E+01	8.236E+00	3.436E+00		2.607E+01	2.076E+01	5.872E+02
18.29.10	7.045E+01	8.070E+00	2.484E+00		2.634E+01	2.064E+01	5.677E+02
18.29.20	6.916E+01	8.195E+00	2.649E+00		2.664E+01	2.040E+01	5.463E+02
18.29.30	6.923E+01	6.822E+00	5.299E+00		2.704E+01	1.964E+01	5.108E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- Continued

(i) Spiral at L

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.32.00	6.903E+01	9.360E+00	3.229E+00		3.011E+01	2.228E+01	1.961E+02
18.32.10	7.200E+01	8.112E+00	3.146E+00		3.044E+01	2.228E+01	1.692E+02
18.32.20	7.095E+01	8.028E+00	3.270E+00		3.080E+01	2.236E+01	1.411E+02
18.32.30	7.035E+01	7.904E+00	3.105E+00		3.070E+01	2.224E+01	1.564E+02
18.32.40	7.170E+01	5.824E+00	3.394E+00		3.024E+01	2.052E+01	2.004E+02
18.32.50	7.236E+01	5.948E+00	2.649E+00		2.991E+01	2.200E+01	2.432E+02
18.33.00	6.966E+01	7.404E+00	2.815E+00		2.951E+01	2.128E+01	2.859E+02
18.33.10	7.260E+01	1.285E+01	8.445E+00		2.756E+01	1.996E+01	4.326E+02
18.33.20	7.293E+01	6.198E+00	1.780E+00		2.899E+01	2.120E+01	3.354E+02
18.33.30	7.085E+01	7.155E+00	2.318E+00		2.864E+01	2.156E+01	3.666E+02
18.33.40	7.161E+01	5.699E+00	2.608E+00		2.828E+01	2.128E+01	3.996E+02
18.33.50	7.279E+01	7.196E+00	3.519E+00		2.797E+01	2.092E+01	4.289E+02
18.34.00	7.461E+01	7.488E+00	4.388E+00		2.770E+01	2.100E+01	4.528E+02
18.34.10	7.081E+01	8.403E+00	4.181E+00		2.746E+01	2.108E+01	4.754E+02
18.34.20	7.032E+01	7.945E+00	4.140E+00		2.715E+01	2.116E+01	4.980E+02
18.34.30	7.005E+01	5.699E+00	3.767E+00		2.683E+01	2.112E+01	5.273E+02
18.34.40	6.989E+01	6.448E+00	3.933E+00		2.655E+01	2.092E+01	5.560E+02
18.34.50	6.949E+01	7.030E+00	5.009E+00		2.621E+01	2.104E+01	5.909E+02
18.35.00	7.134E+01	7.280E+00	5.133E+00		2.605E+01	2.088E+01	6.141E+02
18.35.10	6.986E+01	7.529E+00	5.713E+00		2.595E+01	2.000E+01	6.361E+02
18.35.20	7.048E+01	7.779E+00	4.802E+00		2.568E+01	2.072E+01	6.599E+02
18.35.30	7.104E+01	7.196E+00	4.512E+00		2.548E+01	2.072E+01	6.832E+02
18.35.40	7.055E+01	6.780E+00	4.885E+00		2.521E+01	2.112E+01	7.100E+02
18.35.50	6.547E+01	8.278E+00	3.767E+00		2.490E+01	2.072E+01	7.424E+02
18.36.00	6.794E+01	8.361E+00	3.146E+00		2.474E+01	2.072E+01	7.638E+02
18.36.10	6.606E+01	7.571E+00	3.436E+00		2.468E+01	1.988E+01	7.895E+02
18.36.20	6.761E+01	8.694E+00	2.608E+00		2.441E+01	1.952E+01	8.213E+02
18.36.30	6.768E+01	6.822E+00	2.815E+00		2.384E+01	2.028E+01	8.561E+02
18.36.40	6.675E+01	6.115E+00	3.187E+00		2.346E+01	2.000E+01	8.915E+02
18.36.50	6.652E+01	4.742E+00	3.187E+00		2.313E+01	1.928E+01	9.288E+02
18.37.00	6.415E+01	6.947E+00	3.022E+00		2.282E+01	1.920E+01	9.667E+02
18.37.10	6.431E+01	8.320E+00	3.850E+00		2.251E+01	1.880E+01	1.005E+03
18.37.20	6.322E+01	6.864E+00	4.098E+00		2.230E+01	1.848E+01	1.033E+03
18.37.30	6.385E+01	6.988E+00	4.595E+00		2.212E+01	1.864E+01	1.054E+03
18.37.40	6.263E+01	7.446E+00	3.643E+00		2.177E+01	1.900E+01	1.079E+03
18.37.50	6.207E+01	7.321E+00	4.140E+00		2.171E+01	1.856E+01	1.103E+03
18.38.00	6.329E+01	8.361E+00	4.926E+00		2.168E+01	1.788E+01	1.126E+03
18.38.10	6.128E+01	6.780E+00	3.933E+00		2.193E+01	1.660E+01	1.156E+03
18.38.20	6.002E+01	6.364E+00	3.767E+00		2.130E+01	1.740E+01	1.195E+03
18.38.30	6.286E+01	6.614E+00	3.022E+00		2.078E+01	1.724E+01	1.237E+03
18.38.40	6.131E+01	5.324E+00	5.216E+00		2.056E+01	1.568E+01	1.277E+03
18.38.50	6.042E+01	6.947E+00	4.264E+00		2.019E+01	1.712E+01	1.301E+03
18.39.00	6.217E+01	7.488E+00	3.891E+00		1.997E+01	1.752E+01	1.310E+03
18.39.10	6.260E+01	6.739E+00	3.601E+00		1.999E+01	1.744E+01	1.314E+03
18.39.20	5.880E+01	8.819E+00	3.933E+00		1.965E+01	1.692E+01	1.356E+03
18.39.30	5.854E+01	1.123E+01	3.477E+00		1.914E+01	1.624E+01	1.414E+03
18.39.40	5.715E+01	8.985E+00	4.140E+00		1.891E+01	1.596E+01	1.442E+03
18.39.50	5.943E+01	7.446E+00	3.312E+00		1.886E+01	1.548E+01	1.465E+03
18.40.00	5.623E+01	6.697E+00	2.152E+00		1.883E+01	1.532E+01	1.488E+03
18.40.10	5.821E+01	6.739E+00	2.856E+00		1.870E+01	1.540E+01	1.505E+03
18.40.20	5.814E+01	6.448E+00	2.649E+00		1.884E+01	1.464E+01	1.522E+03
18.40.30	5.751E+01	4.825E+00	3.767E+00		1.896E+01	1.436E+01	1.541E+03
18.40.40	6.042E+01	6.822E+00	5.920E+00		1.874E+01	1.408E+01	1.562E+03
18.40.50	6.372E+01	1.472E+01	1.030E+01		1.819E+01	1.300E+01	1.488E+03

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- Continued

(j) Leg H → G* (flight leg shortened at request of air traffic controller;
G* is 10 km (on G → H flight line) southeast of point G)

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
18.52.00	7.725E+01	8.320E+00	4.015E+00		2.609E+01	2.152E+01	6.135E+02
18.52.10	7.725E+01	7.155E+00	4.512E+00		2.634E+01	2.064E+01	6.129E+02
18.52.20	7.553E+01	8.070E+00	4.181E+00		2.626E+01	2.104E+01	6.074E+02
18.52.30	7.910E+01	8.361E+00	2.815E+00		2.632E+01	2.096E+01	6.043E+02
18.52.40	7.890E+01	6.905E+00	2.815E+00		2.616E+01	2.136E+01	6.080E+02
18.52.50	7.722E+01	5.657E+00	4.678E+00		2.621E+01	2.112E+01	6.074E+02
18.53.00	7.682E+01	5.699E+00	4.264E+00		2.634E+01	2.084E+01	6.062E+02
18.53.10	7.411E+01	6.614E+00	4.761E+00		2.614E+01	2.100E+01	6.074E+02
18.53.20	7.566E+01	9.027E+00	5.630E+00		2.592E+01	2.132E+01	6.178E+02
18.53.30	7.715E+01	6.406E+00	8.569E+00		2.608E+01	1.924E+01	6.110E+02
18.53.40	7.817E+01	5.907E+00	6.624E+00		2.607E+01	2.128E+01	6.080E+02
18.53.50	8.032E+01	7.155E+00	4.429E+00		2.594E+01	2.144E+01	6.123E+02
18.54.00	7.781E+01	8.361E+00	3.726E+00		2.591E+01	2.152E+01	6.147E+02
18.54.10	7.811E+01	6.406E+00	4.222E+00		2.597E+01	2.104E+01	6.080E+02
18.54.20	7.972E+01	4.992E+00	7.410E+00		2.603E+01	2.020E+01	6.135E+02
18.54.30	7.959E+01	7.321E+00	5.423E+00		2.598E+01	2.184E+01	6.123E+02
18.54.40	7.804E+01	5.740E+00	6.417E+00		2.616E+01	2.092E+01	6.135E+02
18.54.50	8.048E+01	8.486E+00	6.789E+00		2.634E+01	2.108E+01	6.110E+02
18.55.00	7.698E+01	7.363E+00	6.210E+00		2.631E+01	2.132E+01	6.104E+02
18.55.10	7.857E+01	8.236E+00	6.996E+00		2.613E+01	2.156E+01	6.123E+02
18.55.20	7.834E+01	9.401E+00	7.948E+00		2.613E+01	2.144E+01	6.135E+02
18.55.30	7.837E+01	8.028E+00	9.190E+00		2.630E+01	2.112E+01	6.117E+02
18.55.40	8.002E+01	7.113E+00	8.031E+00		2.610E+01	2.164E+01	6.147E+02
18.55.50	7.992E+01	7.654E+00	6.996E+00		2.635E+01	2.132E+01	6.141E+02
18.56.00	7.877E+01	7.945E+00	8.073E+00		2.662E+01	2.088E+01	6.092E+02
18.56.10	7.758E+01	6.780E+00	8.983E+00		2.676E+01	2.064E+01	6.104E+02
18.56.20	7.662E+01	6.905E+00	8.197E+00		2.671E+01	2.072E+01	6.098E+02
18.56.30	7.708E+01	8.944E+00	7.079E+00		2.664E+01	2.084E+01	6.104E+02
18.56.40	7.586E+01	6.905E+00	6.831E+00		2.660E+01	2.068E+01	6.104E+02
18.56.50	7.557E+01	7.280E+00	8.652E+00		2.670E+01	1.988E+01	6.074E+02
18.57.00	7.378E+01	5.241E+00	8.859E+00		2.656E+01	2.072E+01	6.123E+02
18.57.10	7.461E+01	5.574E+00	8.694E+00		2.672E+01	1.976E+01	6.104E+02
18.57.20	7.108E+01	6.240E+00	9.273E+00		2.664E+01	2.052E+01	6.086E+02
18.57.30	7.497E+01	7.072E+00	8.859E+00		2.670E+01	2.032E+01	6.098E+02
18.57.40	6.956E+01	6.489E+00	7.534E+00		2.652E+01	2.036E+01	6.098E+02
18.57.50	7.151E+01	6.406E+00	6.706E+00		2.639E+01	2.000E+01	6.123E+02
18.58.00	7.210E+01	7.862E+00	6.168E+00		2.631E+01	2.088E+01	6.135E+02
18.58.10	7.055E+01	8.777E+00	3.767E+00		2.634E+01	2.100E+01	6.135E+02
18.58.20	7.464E+01	8.902E+00	3.229E+00		2.627E+01	2.120E+01	6.104E+02
18.58.30	7.233E+01	8.486E+00	4.347E+00		2.622E+01	2.128E+01	6.141E+02
18.58.40	7.411E+01	7.030E+00	5.878E+00		2.648E+01	2.084E+01	6.117E+02
18.58.50	7.296E+01	6.697E+00	4.968E+00		2.647E+01	2.096E+01	6.117E+02
18.59.00	7.590E+01	6.406E+00	4.098E+00		2.644E+01	2.100E+01	6.110E+02
18.59.10	7.382E+01	6.240E+00	4.719E+00		2.644E+01	2.072E+01	6.117E+02
18.59.20	7.563E+01	6.739E+00	4.140E+00		2.628E+01	2.128E+01	6.147E+02
18.59.30	7.580E+01	6.947E+00	4.926E+00		2.632E+01	2.112E+01	6.117E+02
18.59.40	7.596E+01	5.075E+00	3.808E+00		2.634E+01	2.100E+01	6.117E+02
18.59.50	7.781E+01	5.699E+00	3.270E+00		2.639E+01	2.104E+01	6.104E+02
19.00.00	7.827E+01	6.572E+00	4.015E+00		2.624E+01	2.148E+01	6.129E+02
19.00.10	7.738E+01	7.113E+00	4.305E+00		2.623E+01	2.152E+01	6.129E+02
19.00.20	7.788E+01	7.072E+00	4.761E+00		2.630E+01	2.148E+01	6.086E+02
19.00.30	7.764E+01	8.320E+00	5.589E+00		2.621E+01	2.112E+01	6.172E+02
19.00.40	7.527E+01	7.987E+00	3.436E+00		2.628E+01	2.124E+01	6.172E+02
19.00.50	7.685E+01	8.902E+00	2.566E+00		2.638E+01	2.132E+01	6.202E+02
19.01.00	7.929E+01	8.403E+00	2.856E+00		2.645E+01	2.128E+01	6.074E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- Continued

(k) Spiral at E

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
19.11.30	8.405E+01	8.195E+00	5.589E+00		3.077E+01	2.228E+01	1.656E+02
19.11.40	8.055E+01	8.860E+00	4.719E+00		3.038E+01	2.260E+01	2.065E+02
19.11.50	8.167E+01	8.694E+00	4.595E+00		3.004E+01	2.216E+01	2.395E+02
19.12.00	8.055E+01	8.486E+00	4.388E+00		2.969E+01	2.180E+01	2.670E+02
19.12.10	8.028E+01	8.902E+00	3.850E+00		2.954E+01	2.156E+01	3.012E+02
19.12.20	7.814E+01	7.404E+00	3.850E+00		2.911E+01	2.204E+01	3.287E+02
19.12.30	7.761E+01	7.696E+00	3.643E+00		2.893E+01	2.216E+01	3.538E+02
19.12.40	7.741E+01	6.281E+00	3.519E+00		2.871E+01	2.172E+01	3.880E+02
19.12.50	7.646E+01	6.489E+00	4.098E+00		2.841E+01	2.148E+01	4.130E+02
19.13.00	7.764E+01	8.528E+00	3.891E+00		2.819E+01	2.132E+01	4.393E+02
19.13.10	7.477E+01	7.987E+00	1.863E+00		2.795E+01	2.144E+01	4.625E+02
19.13.20	7.596E+01	6.073E+00	1.945E+00		2.781E+01	2.140E+01	4.852E+02
19.13.30	7.504E+01	8.611E+00	3.974E+00		2.751E+01	2.164E+01	5.151E+02
19.13.40	7.378E+01	7.529E+00	5.009E+00		2.723E+01	2.072E+01	5.530E+02
19.13.50	7.547E+01	6.531E+00	4.968E+00		2.687E+01	2.080E+01	5.835E+02
19.14.00	7.510E+01	6.115E+00	5.299E+00		2.662E+01	2.032E+01	6.184E+02
19.14.10	7.497E+01	5.948E+00	4.554E+00		2.611E+01	2.064E+01	6.544E+02
19.14.20	7.405E+01	3.827E+00	4.885E+00		2.562E+01	2.108E+01	6.887E+02
19.14.30	7.260E+01	6.281E+00	4.388E+00		2.524E+01	2.068E+01	7.253E+02
19.14.40	7.170E+01	7.113E+00	3.560E+00		2.528E+01	1.920E+01	7.540E+02
19.14.50	7.335E+01	7.779E+00	6.541E+00		2.544E+01	1.784E+01	7.791E+02
19.15.00	7.085E+01	7.196E+00	8.073E+00		2.476E+01	2.000E+01	8.084E+02
19.15.10	7.065E+01	5.699E+00	6.003E+00		2.390E+01	2.100E+01	8.598E+02
19.15.20	7.012E+01	7.363E+00	4.843E+00		2.347E+01	2.032E+01	9.019E+02
19.15.30	7.015E+01	6.572E+00	3.726E+00		2.422E+01	1.676E+01	9.166E+02
19.15.40	6.864E+01	6.947E+00	4.761E+00		2.415E+01	1.668E+01	9.368E+02
19.15.50	6.953E+01	7.779E+00	6.210E+00		2.344E+01	1.840E+01	9.655E+02
19.16.00	7.062E+01	6.614E+00	5.754E+00		2.334E+01	1.756E+01	9.930E+02
19.16.10	6.844E+01	6.864E+00	4.761E+00		2.290E+01	1.832E+01	1.021E+03
19.16.20	6.827E+01	8.736E+00	2.939E+00		2.280E+01	1.752E+01	1.050E+03
19.16.30	6.712E+01	8.195E+00	4.057E+00		2.284E+01	1.652E+01	1.077E+03
19.16.40	6.761E+01	7.404E+00	6.210E+00		2.264E+01	1.720E+01	1.097E+03
19.16.50	6.906E+01	6.531E+00	4.802E+00		2.197E+01	1.816E+01	1.133E+03
19.17.00	6.649E+01	5.574E+00	4.885E+00		2.194E+01	1.632E+01	1.168E+03
19.17.10	6.735E+01	7.571E+00	4.098E+00		2.186E+01	1.568E+01	1.204E+03
19.17.20	6.606E+01	7.155E+00	3.767E+00		2.186E+01	1.504E+01	1.238E+03
19.17.30	6.936E+01	5.449E+00	4.429E+00		2.142E+01	1.544E+01	1.266E+03
19.17.40	6.804E+01	5.408E+00	3.146E+00		2.107E+01	1.544E+01	1.289E+03
19.17.50	6.448E+01	6.198E+00	2.898E+01		2.088E+01	1.564E+01	1.312E+03
19.18.00	6.540E+01	4.160E+00	1.159E+00		2.087E+01	1.504E+01	1.340E+03
19.18.10	6.689E+01	5.158E+00	8.694E+01		2.100E+01	1.360E+01	1.368E+03
19.18.20	6.972E+01	7.571E+00	1.904E+00		2.073E+01	1.388E+01	1.391E+03
19.18.30	6.870E+01	7.238E+00	1.159E+00		2.055E+01	1.404E+01	1.417E+03
19.18.40	6.768E+01	5.491E+00	3.726E+01		2.051E+01	1.344E+01	1.442E+03
19.18.50	6.923E+01	7.820E+00	1.035E+00		2.035E+01	1.268E+01	1.473E+03
19.19.00	6.817E+01	7.529E+00	2.318E+00		2.051E+01	1.060E+01	1.500E+03
19.19.10	6.567E+01	7.612E+00	2.691E+00		2.038E+01	1.040E+01	1.528E+03
19.19.20	6.388E+01	7.612E+00	3.105E+00		2.048E+01	1.044E+01	1.532E+03
19.19.30	6.428E+01	5.740E+00	1.614E+00		2.125E+01	1.064E+01	1.481E+03
19.19.40	6.573E+01	5.574E+00	2.815E+00		2.178E+01	1.104E+01	1.439E+03

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- Continued

(1) Leg E → F

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
19.24.10	7.566E+01	7.321E+00	3.601E+00		2.694E+01	2.000E+01	6.349E+02
19.24.20	7.692E+01	7.446E+00	4.595E+00		2.710E+01	2.032E+01	6.135E+02
19.24.30	7.461E+01	6.531E+00	4.181E+00		2.689E+01	2.140E+01	6.086E+02
19.24.40	7.652E+01	5.324E+00	2.856E+00		2.672E+01	2.148E+01	6.086E+02
19.24.50	7.672E+01	7.904E+00	1.780E+00		2.701E+01	2.024E+01	6.098E+02
19.25.00	7.500E+01	7.196E+00	1.821E+00		2.694E+01	2.000E+01	6.123E+02
19.25.10	7.477E+01	6.780E+00	2.898E+00		2.685E+01	2.068E+01	6.123E+02
19.25.20	7.669E+01	6.864E+00	3.891E+00		2.679E+01	2.136E+01	6.086E+02
19.25.30	7.827E+01	8.403E+00	4.595E+00		2.682E+01	2.116E+01	6.086E+02
19.25.40	7.913E+01	7.196E+00	5.506E+00		2.675E+01	2.116E+01	6.117E+02
19.25.50	8.068E+01	6.905E+00	5.133E+00		2.676E+01	2.124E+01	6.117E+02
19.26.00	8.382E+01	5.116E+00	6.044E+00		2.679E+01	2.156E+01	6.092E+02
19.26.10	8.580E+01	6.614E+00	4.181E+00		2.677E+01	2.132E+01	6.062E+02
19.26.20	8.504E+01	7.321E+00	2.152E+00		2.682E+01	2.072E+01	6.123E+02
19.26.30	8.065E+01	6.281E+00	3.187E+00		2.684E+01	2.064E+01	6.092E+02
19.26.40	8.167E+01	8.860E+00	5.133E+00		2.672E+01	2.080E+01	6.117E+02
19.26.50	8.253E+01	9.027E+00	4.678E+00		2.663E+01	2.108E+01	6.117E+02
19.27.00	8.926E+01	8.902E+00	5.506E+00		2.657E+01	2.128E+01	6.135E+02
19.27.10	8.982E+01	8.902E+00	5.754E+00		2.664E+01	2.088E+01	6.104E+02
19.27.20	8.655E+01	6.531E+00	7.162E+00		2.667E+01	2.056E+01	6.117E+02
19.27.30	8.507E+01	5.865E+00	6.499E+00		2.646E+01	2.104E+01	6.153E+02
19.27.40	8.817E+01	6.947E+00	5.299E+00		2.648E+01	2.108E+01	6.135E+02
19.27.50	8.913E+01	6.448E+00	3.270E+00		2.653E+01	2.076E+01	6.147E+02
19.28.00	8.589E+01	6.448E+00	3.477E+00		2.650E+01	2.088E+01	6.141E+02
19.28.10	9.071E+01	7.987E+00	5.175E+00		2.652E+01	2.096E+01	6.141E+02
19.28.20	8.748E+01	7.612E+00	5.713E+00		2.653E+01	2.100E+01	6.123E+02
19.28.30	9.038E+01	7.654E+00	4.926E+00		2.654E+01	2.084E+01	6.123E+02
19.28.40	9.144E+01	6.864E+00	5.713E+00		2.652E+01	2.100E+01	6.123E+02
19.28.50	9.160E+01	7.113E+00	5.423E+00		2.641E+01	2.112E+01	6.147E+02
19.29.00	9.454E+01	8.278E+00	3.933E+00		2.634E+01	2.132E+01	6.135E+02
19.29.10	9.579E+01	9.609E+00	4.926E+00		2.625E+01	2.140E+01	6.147E+02
19.29.20	9.236E+01	9.360E+00	6.624E+00		2.625E+01	2.136E+01	6.159E+02
19.29.30	8.778E+01	8.611E+00	7.369E+00		2.630E+01	2.128E+01	6.147E+02
19.29.40	8.903E+01	9.942E+00	8.321E+00		2.633E+01	2.124E+01	6.135E+02
19.29.50	8.702E+01	9.817E+00	6.541E+00		2.629E+01	2.116E+01	6.172E+02
19.30.00	8.995E+01	6.614E+00	7.038E+00		2.630E+01	2.112E+01	6.159E+02
19.30.10	8.728E+01	8.611E+00	6.003E+00		2.630E+01	2.124E+01	6.159E+02
19.30.20	8.840E+01	8.860E+00	7.038E+00		2.634E+01	2.116E+01	6.147E+02
19.30.30	8.754E+01	7.571E+00	6.168E+00		2.640E+01	2.104E+01	6.123E+02
19.30.40	8.325E+01	7.113E+00	4.429E+00		2.638E+01	2.104E+01	6.165E+02
19.30.50	8.632E+01	8.902E+00	5.796E+00		2.642E+01	2.100E+01	6.141E+02
19.31.00	8.560E+01	7.529E+00	6.831E+00		2.638E+01	2.088E+01	6.153E+02
19.31.10	8.556E+01	7.696E+00	4.678E+00		2.638E+01	2.084E+01	6.141E+02
19.31.20	8.184E+01	7.612E+00	4.512E+00		2.636E+01	2.084E+01	6.135E+02
19.31.30	8.207E+01	6.988E+00	4.098E+00		2.635E+01	2.072E+01	6.147E+02
19.31.40	8.131E+01	7.321E+00	4.885E+00		2.635E+01	2.072E+01	6.147E+02
19.31.50	8.184E+01	8.569E+00	5.630E+00		2.637E+01	2.072E+01	6.135E+02
19.32.00	8.735E+01	1.035E+01	6.292E+00		2.629E+01	2.092E+01	6.159E+02
19.32.10	9.368E+01	8.819E+00	5.547E+00		2.637E+01	2.076E+01	6.141E+02
19.32.20	9.164E+01	7.155E+00	5.837E+00		2.642E+01	2.068E+01	6.147E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- Continued

(1) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
19.32.30	8.890E+01	7.072E+00	4.015E+00		2.654E+01	2.052E+01	6.104E+02
19.32.40	8.754E+01	9.484E+00	5.299E+00		2.642E+01	2.100E+01	6.129E+02
19.32.50	9.395E+01	8.486E+00	4.347E+00		2.641E+01	2.092E+01	6.129E+02
19.33.00	9.111E+01	7.280E+00	3.601E+00		2.636E+01	2.100E+01	6.123E+02
19.33.10	9.190E+01	9.027E+00	3.519E+00		2.626E+01	2.116E+01	6.141E+02
19.33.20	9.309E+01	7.321E+00	2.732E+00		2.630E+01	2.112E+01	6.117E+02
19.33.30	9.147E+01	8.112E+00	3.767E+00		2.630E+01	2.104E+01	6.117E+02
19.33.40	9.084E+01	8.902E+00	5.299E+00		2.630E+01	2.100E+01	6.129E+02
19.33.50	9.042E+01	6.905E+00	6.499E+00		2.625E+01	2.116E+01	6.129E+02
19.34.00	9.632E+01	7.321E+00	6.748E+00		2.624E+01	2.120E+01	6.135E+02
19.34.10	9.975E+01	8.361E+00	8.983E+00		2.617E+01	2.136E+01	6.141E+02
19.34.20	1.019E+02	7.571E+00	7.783E+00		2.619E+01	2.132E+01	6.129E+02
19.34.30	1.014E+02	8.486E+00	8.445E+00		2.621E+01	2.132E+01	6.123E+02
19.34.40	1.045E+02	6.323E+00	7.410E+00		2.618E+01	2.128E+01	6.147E+02
19.34.50	1.002E+02	7.446E+00	5.920E+00		2.619E+01	2.128E+01	6.147E+02
19.35.00	1.001E+02	9.942E+00	5.920E+00		2.622E+01	2.128E+01	6.135E+02
19.35.10	1.011E+02	7.737E+00	5.671E+00		2.613E+01	2.148E+01	6.147E+02
19.35.20	1.060E+02	5.948E+00	5.547E+00		2.622E+01	2.132E+01	6.135E+02
19.35.30	1.042E+02	5.200E+00	6.458E+00		2.628E+01	2.128E+01	6.117E+02
19.35.40	1.023E+02	7.072E+00	6.251E+00		2.628E+01	2.124E+01	6.117E+02
19.35.50	1.040E+02	7.030E+00	5.506E+00		2.628E+01	2.128E+01	6.123E+02
19.36.00	1.055E+02	6.531E+00	6.417E+00		2.632E+01	2.112E+01	6.135E+02
19.36.10	1.018E+02	5.574E+00	5.961E+00		2.634E+01	2.108E+01	6.135E+02
19.36.20	1.009E+02	7.404E+00	4.512E+00		2.632E+01	2.104E+01	6.135E+02
19.36.30	1.032E+02	7.696E+00	5.589E+00		2.634E+01	2.104E+01	6.123E+02
19.36.40	1.023E+02	6.739E+00	3.601E+00		2.633E+01	2.104E+01	6.117E+02
19.36.50	1.043E+02	7.321E+00	3.022E+00		2.631E+01	2.104E+01	6.129E+02
19.37.00	1.065E+02	5.616E+00	6.913E+00		2.631E+01	2.112E+01	6.123E+02
19.37.10	1.037E+02	4.867E+00	5.837E+00		2.631E+01	2.104E+01	6.129E+02
19.37.20	1.028E+02	6.240E+00	7.038E+00		2.630E+01	2.104E+01	6.141E+02
19.37.30	1.043E+02	7.155E+00	7.245E+00		2.632E+01	2.108E+01	6.123E+02
19.37.40	1.063E+02	8.652E+00	6.334E+00		2.633E+01	2.100E+01	6.123E+02
19.37.50	1.073E+02	1.002E+01	5.547E+00		2.631E+01	2.100E+01	6.135E+02
19.38.00	1.063E+02	1.023E+01	4.926E+00		2.629E+01	2.104E+01	6.123E+02
19.38.10	9.962E+01	8.736E+00	5.506E+00		2.629E+01	2.096E+01	6.135E+02
19.38.20	1.000E+02	9.568E+00	5.423E+00		2.622E+01	2.100E+01	6.153E+02
19.38.30	9.741E+01	9.401E+00	4.471E+00		2.623E+01	2.104E+01	6.147E+02
19.38.40	9.606E+01	9.068E+00	5.175E+00		2.625E+01	2.104E+01	6.147E+02
19.38.50	9.411E+01	8.860E+00	5.423E+00		2.628E+01	2.100E+01	6.141E+02
19.39.00	9.477E+01	8.070E+00	5.382E+00		2.631E+01	2.092E+01	6.135E+02
19.39.10	9.603E+01	6.156E+00	5.050E+00		2.641E+01	2.080E+01	6.123E+02
19.39.20	9.695E+01	5.948E+00	3.601E+00		2.637E+01	2.084E+01	6.141E+02
19.39.30	9.200E+01	5.948E+00	3.933E+00		2.634E+01	2.092E+01	6.141E+02
19.39.40	9.352E+01	7.155E+00	3.560E+00		2.631E+01	2.076E+01	6.135E+02
19.39.50	9.207E+01	7.196E+00	4.802E+00		2.634E+01	2.092E+01	6.129E+02
19.40.00	9.230E+01	8.486E+00	6.003E+00		2.633E+01	2.092E+01	6.141E+02
19.40.10	9.216E+01	7.737E+00	5.423E+00		2.640E+01	2.076E+01	6.141E+02
19.40.20	9.203E+01	1.044E+01	5.754E+00		2.639E+01	2.080E+01	6.129E+02
19.40.30	8.943E+01	1.040E+01	7.079E+00		2.639E+01	2.072E+01	6.141E+02
19.40.40	9.051E+01	1.135E+01	7.286E+00		2.636E+01	2.068E+01	6.159E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- Continued

(1) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
19.40.50	8.989E+01	9.734E+00	6.085E+00		2.636E+01	2.068E+01	6.153E+02
19.41.00	9.005E+01	7.155E+00	6.996E+00		2.639E+01	2.068E+01	6.129E+02
19.41.10	9.329E+01	7.030E+00	5.589E+00		2.637E+01	2.072E+01	6.147E+02
19.41.20	9.253E+01	5.782E+00	6.003E+00		2.635E+01	2.080E+01	6.141E+02
19.41.30	9.471E+01	6.697E+00	4.678E+00		2.633E+01	2.076E+01	6.141E+02
19.41.40	9.309E+01	6.032E+00	5.630E+00		2.633E+01	2.080E+01	6.129E+02
19.41.50	9.322E+01	6.822E+00	5.837E+00		2.631E+01	2.080E+01	6.129E+02
19.42.00	9.487E+01	6.697E+00	6.085E+00		2.633E+01	2.072E+01	6.129E+02
19.42.10	9.190E+01	6.281E+00	6.499E+00		2.636E+01	2.064E+01	6.123E+02
19.42.20	9.078E+01	6.531E+00	6.292E+00		2.634E+01	2.056E+01	6.147E+02
19.42.30	8.877E+01	9.027E+00	6.996E+00		2.632E+01	2.064E+01	6.147E+02
19.42.40	9.127E+01	8.320E+00	6.127E+00		2.627E+01	2.068E+01	6.153E+02
19.42.50	9.121E+01	9.859E+00	4.761E+00		2.626E+01	2.068E+01	6.153E+02
19.43.00	9.068E+01	8.528E+00	4.429E+00		2.627E+01	2.060E+01	6.141E+02
19.43.10	8.804E+01	8.985E+00	4.471E+00		2.622E+01	2.064E+01	6.141E+02
19.43.20	8.655E+01	8.569E+00	6.789E+00		2.622E+01	2.052E+01	6.129E+02
19.43.30	8.850E+01	9.776E+00	6.624E+00		2.618E+01	2.068E+01	6.135E+02
19.43.40	8.464E+01	1.102E+01	3.974E+00		2.620E+01	2.052E+01	6.129E+02
19.43.50	8.715E+01	7.280E+00	2.525E+00		2.616E+01	2.056E+01	6.123E+02
19.44.00	8.721E+01	8.320E+00	2.732E+00		2.611E+01	2.080E+01	6.123E+02
19.44.10	8.933E+01	6.780E+00	3.726E+00		2.608E+01	2.084E+01	6.117E+02
19.44.20	8.910E+01	8.236E+00	3.436E+00		2.604E+01	2.080E+01	6.135E+02
19.44.30	8.830E+01	6.947E+00	2.152E+00		2.602E+01	2.084E+01	6.147E+02
19.44.40	8.735E+01	7.238E+00	1.159E+00		2.604E+01	2.076E+01	6.147E+02
19.44.50	8.827E+01	9.235E+00	1.490E+00		2.608E+01	2.068E+01	6.141E+02
19.45.00	8.692E+01	6.697E+00	2.194E+00		2.609E+01	2.064E+01	6.147E+02
19.45.10	8.438E+01	5.990E+00	1.904E+00		2.607E+01	2.064E+01	6.153E+02
19.45.20	8.560E+01	8.444E+00	4.843E+00		2.612E+01	2.064E+01	6.129E+02
19.45.30	8.514E+01	6.572E+00	6.168E+00		2.611E+01	2.056E+01	6.129E+02
19.45.40	8.563E+01	9.360E+00	6.541E+00		2.613E+01	2.052E+01	6.129E+02
19.45.50	8.464E+01	5.657E+00	6.748E+00		2.607E+01	2.052E+01	6.153E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- Continued

(m) Leg D → C

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
19.54.20	9.401E+01	2.246E+00	2.235E+00		2.633E+01	1.972E+01	6.165E+02
19.54.30	9.306E+01	2.704E+00	3.063E+00		2.631E+01	1.980E+01	6.153E+02
19.54.40	9.474E+01	3.577E+00	3.063E+00		2.627E+01	1.984E+01	6.172E+02
19.54.50	9.451E+01	4.534E+00	2.898E+00		2.629E+01	1.992E+01	6.153E+02
19.55.00	9.461E+01	2.454E+00	1.366E+00		2.625E+01	2.004E+01	6.147E+02
19.55.10	9.487E+01	6.656E-01	1.159E+00		2.622E+01	2.008E+01	6.153E+02
19.55.20	9.372E+01	1.872E+00	5.382E-01		2.621E+01	2.016E+01	6.159E+02
19.55.30	9.599E+01	2.204E+00	9.108E-01		2.620E+01	2.016E+01	6.159E+02
19.55.40	9.464E+01	2.745E+00	1.324E+00		2.621E+01	2.016E+01	6.147E+02
19.55.50	9.576E+01	2.080E+00	2.401E+00		2.617E+01	2.024E+01	6.159E+02
19.56.00	9.632E+01	2.745E+00	3.146E+00		2.614E+01	2.036E+01	6.159E+02
19.56.10	9.675E+01	3.827E+00	4.843E+00		2.614E+01	2.044E+01	6.153E+02
19.56.20	9.748E+01	8.320E-01	2.691E+00		2.615E+01	2.048E+01	6.135E+02
19.56.30	9.857E+01	7.904E-01	6.624E-01		2.612E+01	2.048E+01	6.153E+02
19.56.40	9.867E+01	3.702E+00	1.200E+00		2.616E+01	2.060E+01	6.110E+02
19.56.50	9.672E+01	2.496E+00	5.796E-01		2.608E+01	2.060E+01	6.172E+02
19.57.00	9.807E+01	3.161E+00	3.726E-01		2.609E+01	2.056E+01	6.165E+02
19.57.10	9.705E+01	3.785E+00	8.694E-01		2.610E+01	2.064E+01	6.159E+02
19.57.20	9.916E+01	4.409E+00	1.159E+00		2.612E+01	2.064E+01	6.147E+02
19.57.30	9.741E+01	6.073E+00	1.200E+00		2.607E+01	2.076E+01	6.153E+02
19.57.40	9.827E+01	2.038E+00	1.449E+00		2.605E+01	2.080E+01	6.153E+02
19.57.50	9.900E+01	1.955E+00	2.442E+00		2.606E+01	2.080E+01	6.147E+02
19.58.00	9.688E+01	2.246E+00	1.366E+00		2.607E+01	2.064E+01	6.159E+02
19.58.10	9.797E+01	1.248E-01	1.200E+00		2.612E+01	2.064E+01	6.153E+02
19.58.20	9.827E+01	2.787E+00	1.656E-01		2.616E+01	2.068E+01	6.153E+02
19.58.30	9.969E+01	1.580E+00	7.866E-01		2.620E+01	2.068E+01	6.147E+02
19.58.40	9.886E+01	4.867E+00	2.359E+00		2.621E+01	2.068E+01	6.141E+02
19.58.50	9.853E+01	5.158E+00	2.484E+00		2.619E+01	2.076E+01	6.135E+02
19.59.00	1.008E+02	3.702E+00	4.140E-01		2.609E+01	2.092E+01	6.141E+02
19.59.10	9.929E+01	3.785E+00	8.280E-02		2.602E+01	2.096E+01	6.165E+02
19.59.20	9.985E+01	2.246E+00	1.035E+00		2.602E+01	2.096E+01	6.165E+02
19.59.30	9.781E+01	1.622E+00	7.038E-01		2.606E+01	2.088E+01	6.165E+02
19.59.40	9.603E+01	2.080E-01	8.280E-02		2.609E+01	2.088E+01	6.159E+02
19.59.50	9.606E+01	3.036E+00	1.656E-01		2.607E+01	2.092E+01	6.159E+02
20.00.00	9.972E+01	2.163E+00	2.691E+00		2.609E+01	2.092E+01	6.153E+02
20.00.10	9.890E+01	1.414E+00	3.063E+00		2.611E+01	2.096E+01	6.153E+02
20.00.20	1.012E+02	1.996E+00	9.936E-01		2.618E+01	2.084E+01	6.159E+02
20.00.30	9.880E+01	3.660E+00	1.035E+00		2.622E+01	2.080E+01	6.153E+02
20.00.40	1.049E+02	2.412E+00	1.821E+00		2.620E+01	2.084E+01	6.159E+02
20.00.50	1.046E+02	4.700E+00	2.028E+00		2.619E+01	2.084E+01	6.178E+02
20.01.00	1.036E+02	5.824E+00	1.614E+00		2.622E+01	2.084E+01	6.165E+02
20.01.10	1.083E+02	4.201E+00	1.035E+00		2.623E+01	2.092E+01	6.141E+02
20.01.20	1.110E+02	1.539E+00	1.324E+00		2.622E+01	2.096E+01	6.141E+02
20.01.30	1.116E+02	2.745E+00	3.726E-01		2.621E+01	2.092E+01	6.159E+02
20.01.40	1.134E+02	1.996E+00	1.407E+00		2.623E+01	2.092E+01	6.147E+02
20.01.50	1.143E+02	2.329E+00	3.726E-01		2.625E+01	2.096E+01	6.135E+02
20.02.00	1.173E+02	3.369E+00	7.452E-01		2.626E+01	2.100E+01	6.110E+02
20.02.10	1.169E+02	1.622E+00	1.117E+00		2.621E+01	2.104E+01	6.141E+02
20.02.20	1.175E+02	1.164E+00	6.624E-01		2.615E+01	2.108E+01	6.165E+02
20.02.30	1.153E+02	1.331E+00	4.140E-01		2.613E+01	2.112E+01	6.165E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- Continued

(m) Concluded

zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
20.02.40	1.156E+02	2.496E-01	5.382E-01		2.617E+01	2.120E+01	6.165E+02
20.02.50	1.195E+02	1.414E+00	2.401E+00		2.621E+01	2.128E+01	6.141E+02
20.03.00	1.238E+02	2.995E+00	3.312E+00		2.624E+01	2.128E+01	6.147E+02
20.03.10	1.235E+02	2.246E+00	3.353E+00		2.623E+01	2.128E+01	6.141E+02
20.03.20	1.238E+02	6.240E-01	7.038E-01		2.622E+01	2.132E+01	6.135E+02
20.03.30	1.223E+02	1.622E+00	2.070E-01		2.620E+01	2.132E+01	6.141E+02
20.03.40	1.227E+02	2.912E+00	2.070E-01		2.615E+01	2.136E+01	6.147E+02
20.03.50	1.207E+02	2.828E+00	2.359E+00		2.608E+01	2.152E+01	6.165E+02
20.04.00	1.143E+02	1.081E+00	2.359E+00		2.601E+01	2.164E+01	6.153E+02
20.04.10	1.201E+02	2.163E+00	1.697E+00		2.601E+01	2.164E+01	6.153E+02
20.04.20	1.145E+02	3.744E+00	2.442E+00		2.596E+01	2.172E+01	6.159E+02
20.04.30	1.194E+02	4.617E+00	1.531E+00		2.594E+01	2.172E+01	6.159E+02
20.04.40	1.168E+02	5.200E+00	1.614E+00		2.597E+01	2.168E+01	6.165E+02
20.04.50	1.161E+02	4.409E+00	8.280E-01		2.605E+01	2.164E+01	6.165E+02
20.05.00	1.138E+02	1.331E+00	9.936E-01		2.608E+01	2.164E+01	6.147E+02
20.05.10	1.130E+02	5.075E+00	2.070E-01		2.618E+01	2.140E+01	6.147E+02
20.05.20	1.039E+02	6.822E+00	5.382E-01		2.620E+01	2.136E+01	6.159E+02
20.05.30	1.021E+02	4.076E+00	2.318E+00		2.617E+01	2.156E+01	6.153E+02
20.05.40	1.074E+02	2.745E+00	3.726E-01		2.617E+01	2.156E+01	6.153E+02
20.05.50	1.090E+02	2.537E+00	0.000E+00		2.615E+01	2.148E+01	6.165E+02
20.06.00	1.031E+02	8.736E-01	1.738E+00		2.620E+01	2.140E+01	6.165E+02
20.06.10	1.073E+02	2.912E-01	2.152E+00		2.619E+01	2.144E+01	6.165E+02
20.06.20	1.058E+02	2.163E+00	1.614E+00		2.619E+01	2.136E+01	6.165E+02
20.06.30	1.031E+02	1.580E+00	2.649E+00		2.618E+01	2.136E+01	6.172E+02
20.06.40	1.041E+02	1.788E+00	2.401E+00		2.622E+01	2.136E+01	6.153E+02
20.06.50	1.024E+02	2.787E+00	3.146E+00		2.612E+01	2.156E+01	6.178E+02
20.07.00	1.041E+02	3.785E+00	3.353E+00		2.608E+01	2.172E+01	6.159E+02
20.07.10	1.076E+02	1.497E+00	3.312E+00		2.609E+01	2.176E+01	6.135E+02
20.07.20	1.070E+02	1.331E+00	2.194E+00		2.613E+01	2.152E+01	6.165E+02
20.07.30	1.028E+02	3.036E+00	3.312E-01		2.620E+01	2.140E+01	6.147E+02
20.07.40	9.903E+01	1.913E+00	1.945E+00		2.618E+01	2.136E+01	6.159E+02
20.07.50	1.011E+02	2.121E+00	2.070E+00		2.618E+01	2.140E+01	6.147E+02
20.08.00	9.919E+01	3.286E+00	1.449E+00		2.618E+01	2.144E+01	6.159E+02
20.08.10	9.952E+01	2.496E+00	1.656E+00		2.605E+01	2.172E+01	6.159E+02
20.08.20	1.006E+02	1.289E+00	1.366E+00		2.612E+01	2.160E+01	6.141E+02
20.08.30	1.011E+02	1.622E+00	8.694E-01		2.615E+01	2.144E+01	6.165E+02
20.08.40	9.909E+01	2.080E+00	8.694E-01		2.631E+01	2.120E+01	6.147E+02
20.08.50	9.405E+01	2.745E+00	1.656E-01		2.636E+01	2.100E+01	6.147E+02
20.09.00	9.279E+01	3.161E+00	9.108E-01		2.625E+01	2.124E+01	6.141E+02
20.09.10	9.434E+01	3.910E+00	4.140E-02		2.614E+01	2.128E+01	6.159E+02
20.09.20	9.183E+01	3.328E+00	1.573E+00		2.605E+01	2.128E+01	6.184E+02
20.09.30	9.560E+01	2.371E+00	1.449E+00		2.617E+01	2.120E+01	6.165E+02
20.09.40	9.556E+01	1.164E+00	3.726E-01		2.625E+01	2.116E+01	6.165E+02
20.09.50	9.368E+01	3.952E+00	1.738E+00		2.629E+01	2.112E+01	6.147E+02
20.10.00	9.599E+01	3.244E+00	2.691E+00		2.627E+01	2.120E+01	6.141E+02
20.10.10	9.553E+01	2.371E+00	1.531E+00		2.631E+01	2.112E+01	6.147E+02
20.10.20	9.540E+01	3.619E+00	4.140E-01		2.627E+01	2.120E+01	6.159E+02
20.10.30	9.962E+01	2.662E+00	1.407E+00		2.627E+01	2.128E+01	6.159E+02
20.10.40	9.936E+01	2.163E+00	9.936E-01		2.638E+01	2.100E+01	6.153E+02
20.10.50	9.758E+01	7.072E-01	2.484E-01		2.649E+01	2.076E+01	6.165E+02
20.11.00	9.226E+01	2.537E+00	1.656E-01		2.651E+01	2.080E+01	6.147E+02
20.11.10	9.187E+01	3.120E+00	6.210E-01		2.651E+01	2.088E+01	6.153E+02
20.11.20	9.523E+01	2.371E+00	4.140E-01		2.667E+01	2.072E+01	6.147E+02
20.11.30	8.811E+01	1.955E+00	1.904E+00		2.668E+01	2.076E+01	6.153E+02
20.11.40	9.051E+01	5.366E+00	1.821E+00		2.669E+01	2.092E+01	6.110E+02
20.11.50	9.174E+01	4.284E+00	2.691E+00		2.658E+01	2.104E+01	6.147E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- Continued

(n) Leg E → F

zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
20.25.00	7.972E+01	2.912E+00	-6.210E-01		2.655E+01	2.152E+01	6.153E+02
20.25.10	7.642E+01	2.745E+00	-1.614E+00		2.652E+01	2.160E+01	6.159E+02
20.25.20	7.728E+01	5.491E+00	3.312E-01		2.655E+01	2.104E+01	6.159E+02
20.25.30	7.791E+01	3.536E+00	4.140E-02		2.656E+01	2.160E+01	6.172E+02
20.25.40	7.702E+01	4.576E+00	-8.280E-01		2.647E+01	2.192E+01	6.184E+02
20.25.50	7.517E+01	2.828E+00	-1.738E+00		2.652E+01	2.176E+01	6.141E+02
20.26.00	7.731E+01	1.456E+00	-7.452E-01		2.657E+01	2.192E+01	6.141E+02
20.26.10	7.629E+01	3.369E+00	-1.159E+00		2.649E+01	2.188E+01	6.159E+02
20.26.20	7.273E+01	4.118E+00	-2.691E+00		2.663E+01	2.164E+01	6.135E+02
20.26.30	7.705E+01	2.912E+00	-4.140E+00		2.664E+01	2.176E+01	6.123E+02
20.26.40	7.731E+01	1.664E+00	-3.146E+00		2.648E+01	2.232E+01	6.178E+02
20.26.50	7.781E+01	2.496E-01	-1.366E+00		2.654E+01	2.228E+01	6.165E+02
20.27.00	7.817E+01	1.081E+00	-1.945E+00		2.666E+01	2.216E+01	6.110E+02
20.27.10	7.811E+01	3.328E+00	-1.117E+00		2.664E+01	2.200E+01	6.110E+02
20.27.20	8.121E+01	3.411E+00	-3.726E-01		2.646E+01	2.232E+01	6.141E+02
20.27.30	8.339E+01	3.078E+00	3.312E-01		2.646E+01	2.220E+01	6.147E+02
20.27.40	8.289E+01	1.664E+00	2.194E+00		2.656E+01	2.200E+01	6.129E+02
20.27.50	8.048E+01	6.240E-01	2.401E+00		2.653E+01	2.196E+01	6.165E+02
20.28.00	8.019E+01	2.038E+00	2.773E+00		2.657E+01	2.192E+01	6.153E+02
20.28.10	8.058E+01	3.660E+00	3.063E+00		2.663E+01	2.172E+01	6.129E+02
20.28.20	7.791E+01	5.241E+00	4.554E+00		2.659E+01	2.156E+01	6.165E+02
20.28.30	6.362E+01	3.993E+00	8.942E+00		2.667E+01	2.096E+01	6.153E+02
20.28.40	6.910E+01	4.160E+00	1.167E+01		2.662E+01	2.128E+01	6.147E+02
20.28.50	7.174E+01	2.204E+00	9.936E+00		2.664E+01	2.136E+01	6.129E+02
20.29.00	7.817E+01	3.078E+00	6.251E+00		2.663E+01	2.152E+01	6.135E+02
20.29.10	7.646E+01	1.248E-01	4.347E+00		2.661E+01	2.152E+01	6.141E+02
20.29.20	7.972E+01	9.984E-01	3.312E-01		2.664E+01	2.148E+01	6.147E+02
20.29.30	7.972E+01	8.320E-01	-2.732E+00		2.663E+01	2.156E+01	6.141E+02
20.29.40	7.834E+01	1.206E+00	-2.525E+00		2.658E+01	2.168E+01	6.147E+02
20.29.50	8.236E+01	1.331E+00	-1.076E+00		2.655E+01	2.176E+01	6.129E+02
20.30.00	8.457E+01	2.620E+00	-2.277E+00		2.641E+01	2.208E+01	6.141E+02
20.30.10	8.345E+01	3.452E+00	-1.904E+00		2.643E+01	2.212E+01	6.110E+02
20.30.20	8.405E+01	4.035E+00	-2.649E+00		2.646E+01	2.204E+01	6.117E+02
20.30.30	8.418E+01	2.579E+00	-1.863E+00		2.646E+01	2.200E+01	6.123E+02
20.30.40	8.444E+01	1.955E+00	-1.490E+00		2.643E+01	2.196E+01	6.153E+02
20.30.50	8.283E+01	8.736E-01	-6.624E-01		2.639E+01	2.204E+01	6.147E+02
20.31.00	8.355E+01	3.036E+00	-4.554E-01		2.639E+01	2.200E+01	6.129E+02
20.31.10	8.421E+01	1.372E+00	-3.312E-01		2.634E+01	2.192E+01	6.135E+02
20.31.20	8.273E+01	3.744E-01	-2.070E+00		2.633E+01	2.192E+01	6.147E+02
20.31.30	8.362E+01	3.536E+00	4.554E-01		2.623E+01	2.200E+01	6.147E+02
20.31.40	8.246E+01	2.620E+00	6.624E-01		2.628E+01	2.192E+01	6.129E+02
20.31.50	8.444E+01	1.580E+00	1.117E+00		2.629E+01	2.188E+01	6.123E+02
20.32.00	8.203E+01	1.830E+00	8.280E-02		2.632E+01	2.180E+01	6.135E+02
20.32.10	8.137E+01	1.206E+00	-2.484E-01		2.626E+01	2.180E+01	6.165E+02
20.32.20	8.342E+01	1.040E+00	8.280E-02		2.629E+01	2.180E+01	6.153E+02
20.32.30	8.164E+01	1.123E+00	1.697E+00		2.634E+01	2.164E+01	6.153E+02
20.32.40	8.424E+01	2.412E+00	2.773E+00		2.634E+01	2.132E+01	6.147E+02
20.32.50	8.187E+01	3.203E+00	1.904E+00		2.638E+01	2.096E+01	6.153E+02
20.33.00	7.758E+01	2.662E+00	2.484E-01		2.647E+01	2.072E+01	6.147E+02
20.33.10	7.537E+01	2.579E+00	-7.038E-01		2.657E+01	2.056E+01	6.153E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- Continued

(n) Continued

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
20.33.20	7.827E+01	1.249E+00	-1.614E+00		2.663E+01	2.040E+01	6.141E+02
20.33.30	8.200E+01	3.744E-01	-2.111E+00		2.658E+01	2.044E+01	6.153E+02
20.33.40	8.325E+01	2.080E-01	-2.070E+00		2.667E+01	2.028E+01	6.153E+02
20.33.50	8.217E+01	7.072E-01	-5.382E-01		2.674E+01	2.012E+01	6.153E+02
20.34.00	8.131E+01	2.995E+00	8.280E-01		2.683E+01	1.980E+01	6.147E+02
20.34.10	8.154E+01	2.828E+00	-1.780E+00		2.693E+01	1.960E+01	6.147E+02
20.34.20	7.949E+01	1.040E+00	-1.117E+00		2.695E+01	1.980E+01	6.147E+02
20.34.30	8.226E+01	7.072E-01	-3.312E-01		2.694E+01	1.988E+01	6.147E+02
20.34.40	8.124E+01	2.412E+00	-4.554E-01		2.694E+01	2.008E+01	6.147E+02
20.34.50	8.599E+01	1.913E+00	-1.614E+00		2.684E+01	2.072E+01	6.159E+02
20.35.00	9.015E+01	6.656E-01	-1.117E+00		2.686E+01	2.060E+01	6.147E+02
20.35.10	9.114E+01	7.488E-01	-1.117E+00		2.681E+01	2.132E+01	6.153E+02
20.35.20	9.672E+01	9.568E-01	-1.656E-01		2.679E+01	2.152E+01	6.129E+02
20.35.30	9.758E+01	2.620E+00	8.280E-02		2.683E+01	2.148E+01	6.123E+02
20.35.40	9.794E+01	1.331E+00	-1.076E+00		2.684E+01	2.136E+01	6.110E+02
20.35.50	9.556E+01	-1.289E+00	-1.821E+00		2.679E+01	2.144E+01	6.129E+02
20.36.00	9.447E+01	1.372E+00	-1.283E+00		2.677E+01	2.136E+01	6.141E+02
20.36.10	9.616E+01	1.830E+00	-1.656E-01		2.676E+01	2.132E+01	6.129E+02
20.36.20	9.589E+01	1.539E+00	1.780E+00		2.671E+01	2.140E+01	6.135E+02
20.36.30	9.570E+01	7.904E-01	3.146E+00		2.667E+01	2.136E+01	6.153E+02
20.36.40	9.302E+01	3.660E+00	2.856E+00		2.663E+01	2.140E+01	6.141E+02
20.36.50	9.622E+01	3.203E+00	1.490E+00		2.659E+01	2.136E+01	6.165E+02
20.37.00	9.315E+01	2.080E+00	-7.038E-01		2.663E+01	2.144E+01	6.147E+02
20.37.10	9.507E+01	3.494E+00	-1.200E+00		2.661E+01	2.192E+01	6.165E+02
20.37.20	9.669E+01	1.331E+00	8.280E-02		2.665E+01	2.184E+01	6.129E+02
20.37.30	9.801E+01	1.248E-01	1.366E+00		2.665E+01	2.188E+01	6.129E+02
20.37.40	9.636E+01	1.331E+00	6.624E-01		2.660E+01	2.188E+01	6.147E+02
20.37.50	9.507E+01	1.539E+00	6.624E-01		2.656E+01	2.184E+01	6.159E+02
20.38.00	9.220E+01	4.992E-01	8.280E-01		2.657E+01	2.184E+01	6.141E+02
20.38.10	9.223E+01	2.787E+00	7.038E-01		2.660E+01	2.184E+01	6.135E+02
20.38.20	8.999E+01	1.331E+00	-6.624E-01		2.664E+01	2.188E+01	6.123E+02
20.38.30	9.025E+01	2.662E+00	-2.898E-01		2.665E+01	2.184E+01	6.110E+02
20.38.40	8.844E+01	4.326E+00	-7.866E-01		2.658E+01	2.192E+01	6.123E+02
20.38.50	8.867E+01	3.868E+00	-1.117E+00		2.665E+01	2.180E+01	6.092E+02
20.39.00	8.886E+01	2.163E+00	-1.200E+00		2.664E+01	2.184E+01	6.117E+02
20.39.10	8.804E+01	2.163E+00	-9.108E-01		2.660E+01	2.184E+01	6.123E+02
20.39.20	8.731E+01	2.704E+00	-4.140E-01		2.657E+01	2.188E+01	6.123E+02
20.39.30	8.659E+01	2.371E+00	-4.140E-02		2.654E+01	2.188E+01	6.135E+02
20.39.40	8.471E+01	2.412E+00	4.140E-01		2.654E+01	2.176E+01	6.159E+02
20.39.50	8.461E+01	3.536E+00	7.452E-01		2.651E+01	2.184E+01	6.147E+02
20.40.00	8.626E+01	1.580E+00	6.624E-01		2.653E+01	2.176E+01	6.135E+02
20.40.10	8.325E+01	1.206E+00	-1.035E+00		2.653E+01	2.176E+01	6.135E+02
20.40.20	8.547E+01	-2.912E-01	-6.210E-01		2.651E+01	2.172E+01	6.147E+02
20.40.30	8.309E+01	7.072E-01	-9.108E-01		2.653E+01	2.172E+01	6.141E+02
20.40.40	8.553E+01	1.996E+00	-2.070E-01		2.650E+01	2.184E+01	6.159E+02
20.40.50	8.418E+01	2.496E+00	3.726E-01		2.657E+01	2.168E+01	6.141E+02
20.41.00	8.266E+01	4.284E+00	9.108E-01		2.657E+01	2.168E+01	6.141E+02
20.41.10	8.322E+01	3.036E+00	1.573E+00		2.657E+01	2.168E+01	6.141E+02
20.41.20	8.259E+01	2.704E+00	6.624E-01		2.655E+01	2.160E+01	6.159E+02
20.41.30	8.448E+01	1.206E+00	2.898E-01		2.661E+01	2.148E+01	6.147E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- Continued

(n) Concluded

zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
20.41.40	8.517E+01	2.496E+00	5.382E-01		2.665E+01	2.148E+01	6.129E+02
20.41.50	8.576E+01	1.206E+00	4.140E-02		2.668E+01	2.148E+01	6.123E+02
20.42.00	8.405E+01	9.984E-01	9.936E-01		2.670E+01	2.140E+01	6.117E+02
20.42.10	8.332E+01	5.824E-01	4.140E-02		2.669E+01	2.136E+01	6.117E+02
20.42.20	8.490E+01	3.328E-01	7.452E-01		2.668E+01	2.124E+01	6.141E+02
20.42.30	8.226E+01	1.040E+00	1.283E+00		2.669E+01	2.120E+01	6.123E+02
20.42.40	7.949E+01	1.955E+00	8.280E-02		2.669E+01	2.116E+01	6.141E+02
20.42.50	8.081E+01	2.204E+00	1.863E+00		2.673E+01	2.108E+01	6.117E+02
20.43.00	7.969E+01	1.747E+00	9.522E-01		2.671E+01	2.108E+01	6.135E+02
20.43.10	8.157E+01	2.620E+00	8.694E-01		2.672E+01	2.108E+01	6.129E+02
20.43.20	8.134E+01	3.494E+00	1.573E+00		2.670E+01	2.124E+01	6.110E+02
20.43.30	8.230E+01	2.995E+00	1.904E+00		2.671E+01	2.120E+01	6.110E+02
20.43.40	8.134E+01	7.904E-01	1.531E+00		2.664E+01	2.124E+01	6.117E+02
20.43.50	8.464E+01	7.072E-01	2.401E+00		2.664E+01	2.124E+01	6.110E+02
20.44.00	8.299E+01	3.078E+00	2.898E+00		2.655E+01	2.132E+01	6.129E+02
20.44.10	8.233E+01	4.368E+00	2.442E+00		2.650E+01	2.144E+01	6.141E+02
20.44.20	8.061E+01	4.534E+00	2.566E+00		2.649E+01	2.152E+01	6.117E+02
20.44.30	8.431E+01	4.409E+00	1.738E+00		2.648E+01	2.156E+01	6.104E+02
20.44.40	8.520E+01	1.872E+00	3.477E+00		2.639E+01	2.160E+01	6.123E+02
20.44.50	8.088E+01	0.000E+00	3.601E+00		2.640E+01	2.152E+01	6.123E+02
20.45.00	8.104E+01	2.080E-01	3.643E+00		2.641E+01	2.144E+01	6.129E+02
20.45.10	8.015E+01	0.000E+00	3.022E+00		2.641E+01	2.136E+01	6.147E+02
20.45.20	8.203E+01	4.992E-01	3.850E+00		2.645E+01	2.132E+01	6.129E+02
20.45.30	7.939E+01	3.328E-01	1.904E+00		2.645E+01	2.140E+01	6.123E+02
20.45.40	8.184E+01	1.705E+00	2.649E+00		2.639E+01	2.156E+01	6.129E+02
20.45.50	8.101E+01	2.496E+00	3.187E+00		2.643E+01	2.156E+01	6.117E+02
20.46.00	8.695E+01	6.739E+00	5.382E-01		2.542E+01	2.100E+01	6.055E+02
20.46.10	8.382E+01	3.286E+00	2.484E+00		2.643E+01	2.160E+01	6.123E+02
20.46.20	8.111E+01	3.660E+00	1.283E+00		2.636E+01	2.164E+01	6.159E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- Continued

(o) Spiral at H

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
21.00.30	6.563E+01	1.788E+00	2.484E-01		2.687E+01	2.136E+01	6.135E+02
21.00.40	6.761E+01	1.081E+00	2.235E+00		2.686E+01	1.752E+01	6.275E+02
21.00.50	6.547E+01	1.955E+00	1.573E+00		2.630E+01	1.932E+01	6.746E+02
21.01.00	6.748E+01	1.372E+00	2.070E-01		2.583E+01	2.084E+01	7.113E+02
21.01.10	6.761E+01	2.745E+00	2.484E-01		2.554E+01	1.856E+01	7.449E+02
21.01.20	6.778E+01	3.120E+00	1.656E-01		2.515E+01	2.020E+01	7.779E+02
21.01.30	6.517E+01	3.702E+00	4.968E-01		2.491E+01	1.912E+01	8.127E+02
21.01.40	6.431E+01	3.452E+00	2.070E-01		2.471E+01	1.816E+01	8.506E+02
21.01.50	6.174E+01	4.035E+00	7.866E-01		2.442E+01	1.816E+01	8.799E+02
21.02.00	6.217E+01	2.371E+00	7.866E-01		2.416E+01	1.880E+01	9.044E+02
21.02.10	6.174E+01	1.955E+00	1.656E+00		2.401E+01	1.844E+01	9.361E+02
21.02.20	6.240E+01	4.617E+00	1.324E+00		2.383E+01	1.520E+01	9.679E+02
21.02.30	6.392E+01	3.619E+00	1.656E-01		2.366E+01	1.772E+01	9.911E+02
21.02.40	6.563E+01	5.408E-01	1.738E+00		2.331E+01	1.824E+01	1.014E+03
21.02.50	6.444E+01	3.744E-01	1.904E+00		2.333E+01	1.708E+01	1.045E+03
21.03.00	6.210E+01	1.081E+00	1.780E+00		2.308E+01	1.684E+01	1.080E+03
21.03.10	6.167E+01	3.744E-01	1.159E+00		2.300E+01	1.600E+01	1.114E+03
21.03.20	6.042E+01	4.160E-01	1.780E+00		2.226E+01	1.340E+01	1.136E+03
21.03.30	6.322E+01	3.328E-01	1.324E+00		2.248E+01	1.600E+01	1.161E+03
21.03.40	6.114E+01	1.164E+00	9.936E-01		2.273E+01	1.504E+01	1.190E+03
21.03.50	6.111E+01	1.081E+00	1.200E+00		2.245E+01	1.524E+01	1.214E+03
21.04.00	6.098E+01	2.163E+00	1.076E+00		2.222E+01	1.340E+01	1.245E+03
21.04.10	6.326E+01	1.414E+00	2.111E+00		2.196E+01	1.376E+01	1.270E+03
21.04.20	6.105E+01	2.745E+00	1.738E+00		2.150E+01	1.504E+01	1.300E+03
21.04.30	5.946E+01	3.785E+00	3.560E+00		2.133E+01	1.472E+01	1.333E+03
21.04.40	6.032E+01	4.492E+00	4.802E+00		2.126E+01	1.452E+01	1.357E+03
21.04.50	6.167E+01	3.577E+00	2.732E+00		2.106E+01	1.428E+01	1.385E+03
21.05.00	6.035E+01	1.081E+00	2.111E+00		2.076E+01	1.444E+01	1.412E+03
21.05.10	6.085E+01	1.081E+00	3.187E+00		2.069E+01	1.412E+01	1.437E+03
21.05.20	5.956E+01	1.164E+00	3.684E+00		2.082E+01	1.336E+01	1.463E+03
21.05.30	5.834E+01	1.248E-01	3.477E+00		2.054E+01	1.332E+01	1.494E+03
21.05.40	5.725E+01	1.539E+00	2.898E+00		2.032E+01	1.300E+01	1.529E+03
21.05.50	5.771E+01	9.152E-01	3.767E+00		1.990E+01	1.300E+01	1.566E+03
21.06.00	5.986E+01	1.830E+00	4.264E+00		1.981E+01	7.200E+00	1.561E+03

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- Continued

(p) Leg H → G

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
21.12.00	6.949E+01	2.038E+00	5.796E-01		2.684E+01	2.116E+01	6.275E+02
21.12.10	6.563E+01	1.539E+00	6.624E-01		2.671E+01	2.132E+01	6.294E+02
21.12.20	6.583E+01	6.240E-01	0.000E+00		2.646E+01	2.140E+01	6.416E+02
21.12.30	6.725E+01	1.123E+00	2.484E-01		2.687E+01	1.264E+01	6.257E+02
21.12.40	6.900E+01	2.080E-01	1.035E+00		2.668E+01	1.564E+01	6.306E+02
21.12.50	6.619E+01	4.576E-01	2.980E+00		2.684E+01	1.876E+01	6.300E+02
21.13.00	6.609E+01	1.123E+00	4.885E+00		2.694E+01	1.804E+01	6.245E+02
21.13.10	6.712E+01	2.080E-01	1.945E+00		2.681E+01	2.048E+01	6.294E+02
21.13.20	7.002E+01	1.664E-01	8.280E-01		2.676E+01	2.092E+01	6.275E+02
21.13.30	6.963E+01	1.123E+00	3.726E-01		2.682E+01	2.064E+01	6.294E+02
21.13.40	6.844E+01	2.704E+00	6.624E-01		2.685E+01	2.072E+01	6.282E+02
21.13.50	7.114E+01	5.824E-01	1.366E+00		2.680E+01	2.080E+01	6.300E+02
21.14.00	7.329E+01	2.329E+00	1.039E+01		2.524E+01	1.828E+01	6.789E+02
21.14.10	7.164E+01	3.161E+00	3.394E+00		2.692E+01	2.032E+01	6.269E+02
21.14.20	6.801E+01	2.662E+00	1.656E+00		2.694E+01	2.016E+01	6.306E+02
21.14.30	6.441E+01	2.953E+00	2.898E+00		2.703E+01	1.972E+01	6.288E+02
21.14.40	6.303E+01	1.622E+00	3.187E+00		2.693E+01	2.008E+01	6.306E+02
21.14.50	6.642E+01	1.040E+00	2.856E+00		2.683E+01	2.072E+01	6.294E+02
21.15.00	7.124E+01	9.568E-01	2.277E+00		2.673E+01	2.112E+01	6.306E+02
21.15.10	7.147E+01	2.745E+00	2.608E+00		2.673E+01	2.112E+01	6.337E+02
21.15.20	6.699E+01	2.121E+00	4.305E+00		2.701E+01	2.028E+01	6.245E+02
21.15.30	6.550E+01	2.080E+00	4.140E+00		2.712E+01	1.948E+01	6.269E+02
21.15.40	6.141E+01	1.913E+00	8.280E-02		2.700E+01	1.968E+01	6.269E+02
21.15.50	6.230E+01	2.870E+00	4.554E-01		2.679E+01	2.028E+01	6.306E+02
21.16.00	6.662E+01	3.868E+00	2.898E-01		2.677E+01	2.028E+01	6.300E+02
21.16.10	6.619E+01	3.744E+00	1.656E+00		2.683E+01	1.980E+01	6.306E+02
21.16.20	6.378E+01	2.620E+00	2.691E+00		2.680E+01	1.984E+01	6.300E+02
21.16.30	6.402E+01	1.580E+00	2.401E+00		2.676E+01	2.008E+01	6.312E+02
21.16.40	6.336E+01	1.164E+00	9.108E-01		2.675E+01	1.984E+01	6.306E+02
21.16.50	6.154E+01	3.993E+00	3.726E-01		2.668E+01	2.004E+01	6.288E+02
21.17.00	6.283E+01	2.246E+00	6.624E-01		2.658E+01	2.048E+01	6.324E+02
21.17.10	6.458E+01	1.206E+00	4.140E-01		2.660E+01	2.064E+01	6.294E+02
21.17.20	6.712E+01	2.246E+00	4.554E-01		2.654E+01	2.052E+01	6.312E+02
21.17.30	6.979E+01	2.080E-01	2.359E+00		2.660E+01	1.820E+01	6.275E+02
21.17.40	6.718E+01	3.328E-01	3.022E+00		2.658E+01	1.796E+01	6.263E+02
21.17.50	7.207E+01	4.825E+00	4.843E+00		2.524E+01	1.912E+01	6.813E+02
21.18.00	6.580E+01	1.164E+00	1.159E+00		2.648E+01	2.120E+01	6.312E+02
21.18.10	6.867E+01	8.320E-02	8.280E-02		2.644E+01	2.132E+01	6.312E+02
21.18.20	7.065E+01	4.992E-01	1.159E+00		2.639E+01	2.148E+01	6.312E+02
21.18.30	6.999E+01	2.329E+00	9.936E-01		2.636E+01	2.168E+01	6.318E+02
21.18.40	7.071E+01	4.617E+00	1.407E+00		2.647E+01	2.108E+01	6.312E+02
21.18.50	6.791E+01	2.454E+00	1.780E+00		2.668E+01	2.016E+01	6.330E+02
21.19.00	6.197E+01	3.494E+00	1.821E+00		2.666E+01	2.020E+01	6.318E+02
21.19.10	6.151E+01	1.705E+00	2.070E+00		2.657E+01	2.068E+01	6.318E+02
21.19.20	6.590E+01	1.081E+00	1.035E+00		2.645E+01	2.100E+01	6.330E+02
21.19.30	6.567E+01	2.662E+00	6.210E-01		2.654E+01	2.072E+01	6.318E+02
21.19.40	6.504E+01	6.240E-01	8.280E-02		2.696E+01	1.884E+01	6.306E+02
21.19.50	5.791E+01	1.622E+00	1.656E-01		2.682E+01	1.960E+01	6.300E+02
21.20.00	5.996E+01	6.240E-01	1.407E+00		2.688E+01	1.924E+01	6.294E+02
21.20.10	6.217E+01	1.248E-01	1.035E+00		2.692E+01	1.872E+01	6.269E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B8.- Concluded

(p) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
21.20.20	5.887E+01	9.152E-01	7.038E-01		2.691E+01	1.696E+01	6.288E+02
21.20.30	5.606E+01	3.328E-01	1.076E+00		2.684E+01	1.740E+01	6.288E+02
21.20.40	5.728E+01	4.992E-01	0.000E+00		2.657E+01	1.968E+01	6.318E+02
21.20.50	5.893E+01	1.872E+00	7.038E-01		2.648E+01	1.992E+01	6.367E+02
21.21.00	5.850E+01	2.870E+00	2.484E-01		2.678E+01	1.900E+01	6.312E+02
21.21.10	5.712E+01	2.579E+00	1.076E+00		2.685E+01	1.884E+01	6.288E+02
21.21.20	5.567E+01	1.539E+00	1.987E+00		2.670E+01	1.920E+01	6.294E+02
21.21.30	5.557E+01	2.662E+00	1.697E+00		2.670E+01	1.904E+01	6.337E+02
21.21.40	5.732E+01	7.072E-01	1.366E+00		2.672E+01	1.860E+01	6.282E+02
21.21.50	5.722E+01	4.992E-01	2.152E+00		2.669E+01	1.908E+01	6.324E+02
21.22.00	5.808E+01	1.331E+00	1.076E+00		2.676E+01	1.772E+01	6.275E+02
21.22.10	5.831E+01	4.992E-01	1.863E+00		2.668E+01	1.424E+01	6.318E+02
21.22.20	5.844E+01	8.320E-02	9.522E-01		2.672E+01	1.148E+01	6.294E+02
21.22.30	6.012E+01	1.248E-01	8.280E-01		2.677E+01	1.976E+01	6.251E+02
21.22.40	6.091E+01	1.747E+00	4.140E-01		2.682E+01	2.008E+01	6.092E+02

*No data due to instrument malfunction.

APPENDIX B

TABLE B9.- AIRCRAFT DATA FOR GRAB SAMPLE EXPERIMENT ON AUGUST 2, 1978

(a) Leg A → B

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb (*)	NO _x , ppb (*)	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
11.26.00	2.343E+01				2.514E+01	2.224E+01	2.603E+02
11.26.10	2.240E+01				2.531E+01	2.216E+01	2.529E+02
11.26.20	2.224E+01				2.527E+01	2.189E+01	2.591E+02
11.26.30	2.471E+01				2.541E+01	2.160E+01	2.560E+02
11.26.40	2.296E+01				2.545E+01	2.164E+01	2.523E+02
11.26.50	2.303E+01				2.551E+01	2.148E+01	2.511E+02
11.27.00	2.230E+01				2.545E+01	2.176E+01	2.536E+02
11.27.10	2.376E+01				2.532E+01	2.212E+01	2.554E+02
11.27.20	2.135E+01				2.534E+01	2.168E+01	2.566E+02
11.27.30	2.511E+01				2.540E+01	2.144E+01	2.572E+02
11.27.40	2.323E+01				2.533E+01	2.236E+01	2.548E+02
11.27.50	2.422E+01				2.532E+01	2.244E+01	2.548E+02
11.28.00	2.402E+01				2.531E+01	2.256E+01	2.554E+02
11.28.10	2.527E+01				2.526E+01	2.268E+01	2.566E+02
11.28.20	2.768E+01				2.517E+01	2.284E+01	2.560E+02
11.28.30	2.706E+01				2.516E+01	2.280E+01	2.548E+02
11.28.40	2.811E+01				2.518E+01	2.284E+01	2.554E+02
11.28.50	2.923E+01				2.517E+01	2.284E+01	2.560E+02
11.29.00	2.725E+01				2.524E+01	2.276E+01	2.536E+02
11.29.10	3.088E+01				2.535E+01	2.252E+01	2.529E+02
11.29.20	3.072E+01				2.537E+01	2.256E+01	2.542E+02
11.29.30	3.075E+01				2.540E+01	2.256E+01	2.536E+02
11.29.40	3.022E+01				2.542E+01	2.244E+01	2.529E+02
11.29.50	3.032E+01				2.546E+01	2.220E+01	2.529E+02
11.30.00	3.092E+01				2.550E+01	2.212E+01	2.529E+02
11.30.10	2.953E+01				2.544E+01	2.240E+01	2.536E+02
11.30.20	2.937E+01				2.550E+01	2.200E+01	2.542E+02
11.30.30	3.012E+01				2.551E+01	2.180E+01	2.566E+02
11.30.40	2.897E+01				2.558E+01	2.168E+01	2.560E+02
11.30.50	2.854E+01				2.559E+01	2.180E+01	2.554E+02
11.31.00	2.904E+01				2.563E+01	2.172E+01	2.542E+02
11.31.10	2.983E+01				2.556E+01	2.216E+01	2.536E+02
11.31.20	2.646E+01				2.554E+01	2.220E+01	2.529E+02
11.31.30	2.656E+01				2.557E+01	2.216E+01	2.523E+02
11.31.40	2.762E+01				2.552E+01	2.212E+01	2.560E+02
11.31.50	3.039E+01				2.546E+01	2.228E+01	2.554E+02
11.32.00	3.072E+01				2.547E+01	2.224E+01	2.548E+02
11.32.10	3.131E+01				2.546E+01	2.244E+01	2.548E+02
11.32.20	3.168E+01				2.544E+01	2.240E+01	2.548E+02
11.32.30	3.369E+01				2.541E+01	2.240E+01	2.548E+02
11.32.40	3.399E+01				2.539E+01	2.240E+01	2.554E+02
11.32.50	3.375E+01				2.533E+01	2.252E+01	2.560E+02
11.33.00	3.372E+01				2.538E+01	2.216E+01	2.560E+02
11.33.10	3.293E+01				2.540E+01	2.208E+01	2.554E+02
11.33.20	3.375E+01				2.544E+01	2.220E+01	2.481E+02
11.33.30	3.276E+01				2.526E+01	2.208E+01	2.633E+02
11.33.40	3.240E+01				2.531E+01	2.196E+01	2.597E+02
11.33.50	3.319E+01				2.526E+01	2.192E+01	2.615E+02
11.34.00	3.346E+01				2.532E+01	2.196E+01	2.578E+02
11.34.10	3.276E+01				2.532E+01	2.196E+01	2.566E+02

*CH₄ and NO/NO_x instruments not operated during the experiment.

APPENDIX B

TABLE B9.- Continued

(a) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb (*)	NO _x , ppb (*)	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
11.34.20	3.316E+01				2.527E+01	2.204E+01	2.572E+02
11.34.30	3.418E+01				2.531E+01	2.188E+01	2.578E+02
11.34.40	3.392E+01				2.531E+01	2.204E+01	2.572E+02
11.34.50	3.375E+01				2.532E+01	2.204E+01	2.560E+02
11.35.00	3.445E+01				2.533E+01	2.212E+01	2.560E+02
11.35.10	3.649E+01				2.526E+01	2.212E+01	2.584E+02
11.35.20	3.415E+01				2.518E+01	2.232E+01	2.591E+02
11.35.30	3.366E+01				2.515E+01	2.244E+01	2.572E+02
11.35.40	3.366E+01				2.523E+01	2.228E+01	2.566E+02
11.35.50	3.438E+01				2.527E+01	2.236E+01	2.529E+02
11.36.00	3.554E+01				2.514E+01	2.236E+01	2.615E+02
11.36.10	3.445E+01				2.517E+01	2.244E+01	2.591E+02
11.36.20	3.445E+01				2.527E+01	2.216E+01	2.591E+02
11.36.30	3.339E+01				2.529E+01	2.224E+01	2.597E+02
11.36.40	3.207E+01				2.531E+01	2.236E+01	2.566E+02
11.36.50	3.260E+01				2.534E+01	2.236E+01	2.548E+02
11.37.00	3.494E+01				2.542E+01	2.220E+01	2.554E+02
11.37.10	3.333E+01				2.538E+01	2.228E+01	2.560E+02
11.37.20	3.465E+01				2.539E+01	2.244E+01	2.542E+02
11.37.30	3.527E+01				2.538E+01	2.232E+01	2.548E+02

*CH₄ and NO/NO_x instruments not operated during the experiment.

APPENDIX B

TABLE B9.- Continued

(b) Leg D → C

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb (*)	NO _x , ppb (*)	CH ₄ , ppm (*)	T, °C	T _{ap} , °C	h, m
11.43.00	3.448E+01				2.525E+01	2.204E+01	2.572E+02
11.43.10	3.567E+01				2.526E+01	2.244E+01	2.517E+02
11.43.20	3.471E+01				2.513E+01	2.260E+01	2.597E+02
11.43.30	3.441E+01				2.508E+01	2.264E+01	2.615E+02
11.43.40	3.191E+01				2.508E+01	2.276E+01	2.578E+02
11.43.50	3.290E+01				2.511E+01	2.272E+01	2.591E+02
11.44.00	3.468E+01				2.518E+01	2.264E+01	2.572E+02
11.44.10	3.488E+01				2.521E+01	2.256E+01	2.554E+02
11.44.20	3.567E+01				2.520E+01	2.240E+01	2.578E+02
11.44.30	3.656E+01				2.522E+01	2.228E+01	2.584E+02
11.44.40	3.616E+01				2.523E+01	2.240E+01	2.584E+02
11.44.50	3.527E+01				2.521E+01	2.248E+01	2.578E+02
11.45.00	3.702E+01				2.519E+01	2.256E+01	2.572E+02
11.45.10	3.771E+01				2.517E+01	2.264E+01	2.578E+02
11.45.20	3.626E+01				2.513E+01	2.264E+01	2.578E+02
11.45.30	3.636E+01				2.511E+01	2.276E+01	2.572E+02
11.45.40	3.593E+01				2.499E+01	2.304E+01	2.578E+02
11.45.50	3.620E+01				2.492E+01	2.316E+01	2.584E+02
11.46.00	3.676E+01				2.491E+01	2.312E+01	2.578E+02
11.46.10	3.560E+01				2.498E+01	2.296E+01	2.572E+02
11.46.20	3.362E+01				2.495E+01	2.292E+01	2.572E+02
11.46.30	3.415E+01				2.501E+01	2.296E+01	2.566E+02
11.46.40	3.514E+01				2.502E+01	2.312E+01	2.554E+02
11.46.50	3.039E+01				2.502E+01	2.300E+01	2.578E+02
11.47.00	3.168E+01				2.504E+01	2.260E+01	2.578E+02
11.47.10	3.059E+01				2.515E+01	2.236E+01	2.578E+02
11.47.20	3.389E+01				2.530E+01	2.108E+01	2.591E+02
11.47.30	3.313E+01				2.530E+01	2.132E+01	2.578E+02
11.47.40	1.735E+01				2.519E+01	2.160E+01	2.566E+02
11.47.50	2.854E+01				2.526E+01	2.140E+01	2.548E+02
11.48.00	3.474E+01				2.520E+01	2.140E+01	2.584E+02
11.48.10	3.494E+01				2.520E+01	2.148E+01	2.566E+02
11.48.20	3.359E+01				2.523E+01	2.144E+01	2.566E+02
11.48.30	3.686E+01				2.530E+01	2.120E+01	2.572E+02
11.48.40	3.719E+01				2.538E+01	2.112E+01	2.572E+02
11.48.50	3.758E+01				2.538E+01	2.112E+01	2.578E+02
11.49.00	3.491E+01				2.538E+01	2.124E+01	2.572E+02
11.49.10	3.570E+01				2.545E+01	2.108E+01	2.566E+02
11.49.20	3.468E+01				2.545E+01	2.120E+01	2.572E+02
11.49.30	3.643E+01				2.540E+01	2.144E+01	2.566E+02
11.49.40	3.408E+01				2.534E+01	2.152E+01	2.560E+02
11.49.50	3.478E+01				2.529E+01	2.164E+01	2.591E+02
11.50.00	3.405E+01				2.524E+01	2.188E+01	2.584E+02
11.50.10	3.362E+01				2.520E+01	2.208E+01	2.584E+02
11.50.20	3.399E+01				2.516E+01	2.232E+01	2.578E+02
11.50.30	3.082E+01				2.507E+01	2.236E+01	2.597E+02
11.50.40	3.276E+01				2.510E+01	2.216E+01	2.597E+02
11.50.50	3.270E+01				2.518E+01	2.208E+01	2.591E+02
11.51.00	3.207E+01				2.520E+01	2.212E+01	2.584E+02
11.51.10	3.511E+01				2.528E+01	2.192E+01	2.584E+02

*CH₄ and NO/NO_x instruments not operated during the experiment.

APPENDIX B

TABLE B9.- Continued

(b) Concluded

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb (*)	NO _x , ppb (*)	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
11.51.20	3.550E+01				2.538E+01	2.148E+01	2.584E+02
11.51.30	3.168E+01				2.539E+01	2.136E+01	2.584E+02
11.51.40	3.187E+01				2.531E+01	2.180E+01	2.584E+02
11.51.50	3.422E+01				2.535E+01	2.164E+01	2.566E+02
11.52.00	3.537E+01				2.533E+01	2.168E+01	2.566E+02
11.52.10	3.488E+01				2.528E+01	2.152E+01	2.615E+02
11.52.20	3.659E+01				2.523E+01	2.204E+01	2.529E+02
11.52.30	3.646E+01				2.506E+01	2.204E+01	2.603E+02
11.52.40	3.418E+01				2.499E+01	2.172E+01	2.603E+02
11.52.50	3.709E+01				2.493E+01	2.164E+01	2.621E+02
11.53.00	3.689E+01				2.499E+01	2.164E+01	2.597E+02
11.53.10	3.768E+01				2.507E+01	2.184E+01	2.597E+02
11.53.20	3.798E+01				2.516E+01	2.156E+01	2.597E+02
11.53.30	3.847E+01				2.515E+01	2.160E+01	2.615E+02
11.53.40	3.672E+01				2.524E+01	2.152E+01	2.578E+02
11.53.50	3.392E+01				2.534E+01	2.140E+01	2.554E+02

*CH₄ and NO/NO_x instruments not operated during the experiment.

APPENDIX B

TABLE B9.- Continued

(c) Leg E → F

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb (*)	NO _x , ppb (*)	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
12.02.00	3.237E+01				2.583E+01	2.292E+01	2.236E+02
12.02.10	3.059E+01				2.569E+01	2.284E+01	2.303E+02
12.02.20	3.445E+01				2.570E+01	2.280E+01	2.279E+02
12.02.30	3.141E+01				2.574E+01	2.288E+01	2.206E+02
12.02.40	3.102E+01				2.582E+01	2.284E+01	2.126E+02
12.02.50	3.131E+01				2.592E+01	2.284E+01	2.053E+02
12.03.00	3.418E+01				2.600E+01	2.288E+01	1.961E+02
12.03.10	3.570E+01				2.604E+01	2.296E+01	1.882E+02
12.03.20	3.418E+01				2.609E+01	2.304E+01	1.784E+02
12.03.30	3.501E+01				2.620E+01	2.304E+01	1.692E+02
12.03.40	3.514E+01				2.627E+01	2.304E+01	1.613E+02
12.03.50	3.395E+01				2.636E+01	2.308E+01	1.515E+02
12.04.00	3.534E+01				2.636E+01	2.300E+01	1.478E+02
12.04.10	3.392E+01				2.596E+01	2.304E+01	1.735E+02
12.04.20	3.349E+01				2.565E+01	2.320E+01	1.967E+02
12.04.30	3.402E+01				2.544E+01	2.316E+01	2.157E+02
12.04.40	3.481E+01				2.530E+01	2.300E+01	2.309E+02
12.04.50	3.564E+01				2.519E+01	2.292E+01	2.438E+02
12.05.00	3.408E+01				2.508E+01	2.296E+01	2.523E+02
12.05.10	3.468E+01				2.499E+01	2.296E+01	2.615E+02
12.05.20	3.382E+01				2.496E+01	2.292E+01	2.670E+02
12.05.30	3.425E+01				2.503E+01	2.288E+01	2.670E+02
12.05.40	3.514E+01				2.511E+01	2.276E+01	2.658E+02
12.05.50	3.606E+01				2.522E+01	2.268E+01	2.639E+02
12.06.00	3.630E+01				2.523E+01	2.276E+01	2.627E+02
12.06.10	3.656E+01				2.520E+01	2.284E+01	2.615E+02
12.06.20	3.511E+01				2.508E+01	2.296E+01	2.646E+02
12.06.30	3.669E+01				2.511E+01	2.292E+01	2.639E+02
12.06.40	3.659E+01				2.514E+01	2.288E+01	2.633E+02
12.06.50	3.676E+01				2.514E+01	2.288E+01	2.639E+02
12.07.00	3.537E+01				2.515E+01	2.284E+01	2.639E+02
12.07.10	3.537E+01				2.515E+01	2.284E+01	2.633E+02
12.07.20	3.395E+01				2.513E+01	2.288E+01	2.633E+02
12.07.30	3.339E+01				2.509E+01	2.292E+01	2.646E+02
12.07.40	3.290E+01				2.505E+01	2.296E+01	2.646E+02
12.07.50	3.461E+01				2.504E+01	2.296E+01	2.633E+02
12.08.00	3.346E+01				2.506E+01	2.296E+01	2.627E+02
12.08.10	3.191E+01				2.506E+01	2.300E+01	2.627E+02
12.08.20	3.168E+01				2.504E+01	2.296E+01	2.652E+02
12.08.30	3.511E+01				2.504E+01	2.296E+01	2.658E+02
12.08.40	3.375E+01				2.506E+01	2.292E+01	2.646E+02
12.08.50	3.511E+01				2.512E+01	2.288E+01	2.633E+02
12.09.00	3.557E+01				2.515E+01	2.288E+01	2.627E+02
12.09.10	3.593E+01				2.517E+01	2.288E+01	2.627E+02
12.09.20	3.649E+01				2.515E+01	2.288E+01	2.639E+02
12.09.30	3.623E+01				2.514E+01	2.280E+01	2.646E+02
12.09.40	3.458E+01				2.513E+01	2.280E+01	2.658E+02
12.09.50	3.524E+01				2.517E+01	2.276E+01	2.639E+02
12.10.00	3.666E+01				2.517E+01	2.276E+01	2.639E+02

*CH₄ and NO/NO_x instruments not operated during the experiment.

APPENDIX B

TABLE B9.- Continued

(d) Leg H → G

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb (*)	NO _x , ppb (*)	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
12.24.00	3.012E+01				2.554E+01	2.216E+01	2.621E+02
12.24.10	2.828E+01				2.556E+01	2.212E+01	2.615E+02
12.24.20	3.036E+01				2.560E+01	2.212E+01	2.591E+02
12.24.30	2.682E+01				2.552E+01	2.200E+01	2.621E+02
12.24.40	2.570E+01				2.555E+01	2.216E+01	2.603E+02
12.24.50	2.844E+01				2.549E+01	2.224E+01	2.609E+02
12.25.00	2.946E+01				2.548E+01	2.224E+01	2.609E+02
12.25.10	2.880E+01				2.549E+01	2.224E+01	2.603E+02
12.25.20	2.930E+01				2.539E+01	2.232E+01	2.615E+02
12.25.30	3.042E+01				2.536E+01	2.236E+01	2.615E+02
12.25.40	3.088E+01				2.529E+01	2.240E+01	2.609E+02
12.25.50	3.171E+01				2.527E+01	2.236E+01	2.603E+02
12.26.00	3.009E+01				2.518E+01	2.244E+01	2.621E+02
12.26.10	3.115E+01				2.518E+01	2.248E+01	2.621E+02
12.26.20	3.069E+01				2.526E+01	2.228E+01	2.615E+02
12.26.30	3.088E+01				2.532E+01	2.228E+01	2.584E+02
12.26.40	2.983E+01				2.522E+01	2.236E+01	2.615E+02
12.26.50	2.791E+01				2.519E+01	2.240E+01	2.615E+02
12.27.00	2.722E+01				2.516E+01	2.240E+01	2.621E+02
12.27.10	2.983E+01				2.517E+01	2.244E+01	2.609E+02
12.27.20	2.900E+01				2.515E+01	2.248E+01	2.609E+02
12.27.30	2.907E+01				2.516E+01	2.248E+01	2.621E+02
12.27.40	3.088E+01				2.521E+01	2.240E+01	2.615E+02
12.27.50	3.125E+01				2.523E+01	2.236E+01	2.603E+02
12.28.00	3.092E+01				2.520E+01	2.228E+01	2.615E+02
12.28.10	3.237E+01				2.519E+01	2.224E+01	2.621E+02
12.28.20	3.171E+01				2.522E+01	2.216E+01	2.621E+02
12.28.30	3.207E+01				2.526E+01	2.208E+01	2.609E+02
12.28.40	3.290E+01				2.529E+01	2.208E+01	2.609E+02
12.28.50	3.326E+01				2.530E+01	2.228E+01	2.603E+02
12.29.00	3.234E+01				2.530E+01	2.232E+01	2.603E+02
12.29.10	3.234E+01				2.524E+01	2.232E+01	2.615E+02
12.29.20	3.286E+01				2.527E+01	2.228E+01	2.639E+02
12.29.30	3.039E+01				2.559E+01	2.228E+01	2.560E+02
12.29.40	3.286E+01				2.573E+01	2.236E+01	2.572E+02
12.29.50	3.283E+01				2.552E+01	2.220E+01	2.866E+02
12.30.00	3.237E+01				2.519E+01	2.204E+01	3.232E+02

*CH₄ and NO/NO_x instruments not operated during the experiment.

APPENDIX B

TABLE B9.- Concluded

(e) Spiral at G

Zulu time, hr:min:sec	O ₃ , ppb	NO, ppb (*)	NO _x , ppb (*)	CH ₄ , ppm (*)	T, °C	T _{dp} , °C	h, m
12.30.00	3.237E+01				2.519E+01	2.204E+01	3.232E+02
12.30.10	3.230E+01				2.496E+01	2.196E+01	3.501E+02
12.30.20	3.517E+01				2.471E+01	2.164E+01	3.782E+02
12.30.30	3.412E+01				2.449E+01	2.112E+01	4.075E+02
12.30.40	3.204E+01				2.428E+01	2.064E+01	4.344E+02
12.30.50	3.187E+01				2.417E+01	2.048E+01	4.589E+02
12.31.00	2.986E+01				2.397E+01	2.052E+01	4.821E+02
12.31.10	3.118E+01				2.374E+01	2.048E+01	5.078E+02
12.31.20	2.933E+01				2.348E+01	2.016E+01	5.371E+02
12.31.30	2.841E+01				2.331E+01	1.980E+01	5.628E+02
12.31.40	3.115E+01				2.313E+01	1.948E+01	5.897E+02
12.31.50	3.036E+01				2.288E+01	1.924E+01	6.190E+02
12.32.00	3.306E+01				2.255E+01	1.912E+01	6.526E+02
12.32.10	3.055E+01				2.219E+01	1.900E+01	6.923E+02
12.32.20	2.871E+01				2.200E+01	1.904E+01	7.174E+02
12.32.30	3.092E+01				2.181E+01	1.980E+01	7.394E+02
12.32.40	3.118E+01				2.153E+01	1.976E+01	7.718E+02
12.32.50	3.069E+01				2.128E+01	1.932E+01	8.011E+02
12.33.00	2.986E+01				2.108E+01	1.892E+01	8.310E+02
12.33.10	2.953E+01				2.093E+01	1.844E+01	8.585E+02
12.33.20	2.897E+01				2.076E+01	1.836E+01	8.866E+02
12.33.30	3.260E+01				2.067E+01	1.764E+01	9.154E+02
12.33.40	3.280E+01				2.079E+01	1.708E+01	9.404E+02
12.33.50	3.428E+01				2.072E+01	1.688E+01	9.630E+02
12.34.00	3.375E+01				2.053E+01	1.680E+01	9.875E+02
12.34.10	3.296E+01				2.037E+01	1.656E+01	1.014E+03
12.34.20	3.540E+01				2.037E+01	1.628E+01	1.040E+03
12.34.30	3.762E+01				2.029E+01	1.612E+01	1.068E+03
12.34.40	3.646E+01				2.017E+01	1.600E+01	1.092E+03
12.34.50	3.547E+01				1.997E+01	1.588E+01	1.120E+03
12.35.00	3.547E+01				1.971E+01	1.600E+01	1.148E+03
12.35.10	3.606E+01				1.949E+01	1.608E+01	1.172E+03
12.35.20	3.844E+01				1.954E+01	1.568E+01	1.183E+03
12.35.30	3.798E+01				1.969E+01	1.584E+01	1.176E+03
12.35.40	3.692E+01				1.972E+01	1.572E+01	1.181E+03

*CH₄ and NO/NO_x instruments not operated during the experiment.

REFERENCES

1. Wagner, H. Scott; Gregory, Gerald L.; and Buglia, James J.: The Southeastern Virginia Urban Plume, A Test Site for Remote Sensors. Paper presented at 71st Air Pollution Control Association Annual Meeting and Exhibition (Houston), June 25-30, 1978.
2. Gregory, Gerald L.; and Wagner, H. Scott, eds.: Summary of Southeastern Virginia Urban Plume Measurement Data for August 4 and 5, 1977. NASA TM-78822, 1979.
3. Washington Sectional Aeronautical Chart. 23rd ed. NOAA, U.S. Dep. Commer., Mar. 23, 1978.
4. Wornom, Dewey E.; Woods, David C.; Thomas, Mitchel E.; and Tyson, Richard W.: Instrumentation of Sampling Aircraft for Measurement of Launch Vehicle Effluents. NASA TM X-3500, 1977.
5. McKee, Herbert C.: Collaborative Testing of Methods To Measure Air Pollutants. III. The Chemiluminescent Method for Ozone: Determination of Precision. J. Air Pollut. Control Assoc., vol. 26, no. 2, Feb. 1976, pp. 124-128.
6. Sebacher, Daniel I.: Airborne Nondispersive Infrared Monitor for Atmospheric Trace Gases. Rev. Sci. Instrum., vol. 49, no. 11, Nov. 1978, pp. 1520-1525.
7. Decker, C. E.; Sickles, J. E., II; Bach, W. D.; Vukovich, F. M.; and Worth, J. J. B.: Project Da Vinci II: Data Analysis and Interpretation. RTI/1421/00-01F (EPA Contract No. 68-02-2568), Research Triangle Inst., May 1978.

TABLE 1.- DESIGNED SAMPLING TIMES FOR AIRCRAFTS DURING PRIMARY EXPERIMENT

[All times given in EDT]

Leg ^a	Sampling times for -		
	Aircraft 1 ^b	Aircraft 2 ^c	Aircraft 3 ^d
A → B (B') (B'')	1057 to 1115	0935 to 0942 1204 to 1210 1425 to 1432 1611 to 1625 1720 to 1727	0935 to 0948 1200 to 1212 1444 to 1457
(C') C → D (D')	1604 to 1624	1441 to 1457 1655 to 1710	1504 to 1519 1706 to 1721
(E') E → F (F')	1002 to 1022 1532 to 1552 1636 to 1656	1000 to 1028 1534 to 1552	1002 to 1019 1125 to 1146 1528 to 1552 1730 to 1755
G → H	0925 to 0937 1455 to 1507 1725 to 1736	1041 to 1050 1516 to 1525	1807 to 1816
K → L	0850 to 0900 1420 to 1430	1059 to 1112	0858 to 0904 1050 to 1059 1824 to 1831

^aSome aircraft flew extended legs to prime locations in figure 2.

^bAircraft 1 - in situ measurements of O₃, NO, NO_x, CH₄, temperature, and dewpoint.

^cAircraft 2 - in situ measurements of O₃, CO, CH₄, NMHC, and N₂O.

^dAircraft 3 - remote and in situ measurements of O₃.

TABLE 2.- DESIGNED SAMPLING TIMES FOR AIRCRAFTS DURING PHOTOCHEMICAL
OXIDANT BOX EXPERIMENT

[All times given in EDT]

Leg	Sampling times for -	
	Aircraft 1 ^a	Aircraft 3 ^b
A → B	0542 to 0550 0647 to 0655 0937 to 0945 1227 to 1235 1447 to 1455 1552 to 1600	0752 to 0800 0847 to 0855 1037 to 1045 1137 to 1145 1347 to 1355 1657 to 1705
C → D	0531 to 0539 0636 to 0644 0741 to 0749 0926 to 0934 1216 to 1224 1436 to 1444 1541 to 1549	0741 to 0749 0836 to 0844 1026 to 1034 1126 to 1134 1336 to 1344 1646 to 1654
E → F	0521 to 0528 0626 to 0633 0731 to 0738 0916 to 0923 1206 to 1213 1426 to 1433 1531 to 1538	0826 to 0833 1016 to 1023 1116 to 1123 1326 to 1333 1636 to 1643
G → H	0510 to 0516 0615 to 0621 0720 to 0726 0905 to 0911 1155 to 1201 1415 to 1421 1520 to 1526 1625 to 1631	0815 to 0821 1005 to 1011 1105 to 1111 1315 to 1321 1415 to 1421 1625 to 1631 1725 to 1731

^aAircraft 1 - in situ measurements of O₃, NO, NO_x, CH₄, temperature, and dewpoint.

^bAircraft 3 - remote and in situ measurements of O₃.

TABLE 3.- AIRCRAFT 1 FLIGHT PARAMETERS FOR REGIONAL TRAVERSE EXPERIMENT
ON JULY 12, 1978

Flight leg or location (a)	Altitude, m (b)	Time of day, EDT	Data (c)				
			O ₃	NO/NO _x	CH ₄	T	T _{dp}
Spiral at A	150 to 2000	1229 to 1239	✓				
A → B	760	1246 to 1318	✓				
B → C	760	1318 to 1339	✓				
C → D	760	1339 to 1352	✓				
D → E	760	1352 to 1405	✓				
Spiral at WFC	150 to 2000	1407 to 1418	✓				
WFC → A'	760	1422 to 1437	✓				
A' → H	760	1437 to 1513	✓				

^aFlight legs refer to figure 3.

^bAltitude variation for constant-altitude flight legs typically less than ±15 m.

^cOnly O₃ data due to operational error.

TABLE 4.- AIRCRAFT 1 FLIGHT PARAMETERS FOR REGIONAL TRAVERSE EXPERIMENT

ON JULY 17, 1978

Flight leg or location (a)	Altitude, m (b)	Time of day, EDT	Data				
			O ₃	NO/NO _x	CH ₄	T	T _{dp}
K → H	301	1121 to 1147	✓	✓		✓	✓
Spiral at H	186 to 1566	1152 to 1200	✓	✓		✓	✓
H → A	309	1212 to 1229	✓	✓		✓	✓
A → E	324	1332 to 1411	✓	✓	✓	✓	✓
Spiral at WFC	64 to 1568	1415 to 1423	✓	✓		✓	✓
WFC → L	331	1430 to 1459	✓	✓	✓	✓	✓

^aFlight legs refer to figure 3.

^bAltitude variation for constant-altitude flight legs typically less than ±15 m.

TABLE 5.- AIRCRAFT 1 FLIGHT PARAMETERS FOR REGIONAL TRAVERSE EXPERIMENT

ON JULY 18, 1978

Flight leg or location (a)	Altitude, m (b)	Time of day, EDT	Data				
			O ₃	NO/NO _x	CH ₄	T	T _{dp}
K → H	411	1126 to 1152	✓	✓		✓	✓
Spiral at H	413 to 1498	1153 to 1202	✓	✓		✓	✓
H → A	419	1210 to 1226	✓	✓		✓	✓
A → E	441	1333 to 1412	✓	✓	✓	✓	✓
Spiral at WFC	12 to 1501	1418 to 1427	✓	✓		✓	✓
WFC → L	440	1433 to 1503	✓	✓	✓	✓	✓

^aFlight legs refer to figure 3.

^bAltitude variation for constant-altitude flight legs typically less than ±15 m.

TABLE 6.- AIRCRAFT 1 FLIGHT PARAMETERS FOR REMOTE SENSOR CALIBRATION

EXPERIMENT ON JULY 19, 1978

Flight leg or location (a)	Altitude, m (b)	Time of day, EDT	Data (c)				
			O ₃	NO/NO _x	CH ₄	T	T _{dp}
Spiral at B	90 to 2940	1236 to 1255	✓	✓		✓	✓
B → C	2368	1258 to 1307	✓	✓		✓	✓
C → A	1439	1310 to 1323	✓	✓		✓	✓
A → C	833	1325 to 1341	✓	✓		✓	✓
C → A	537	1343 to 1357	✓	✓		✓	✓
A → C	236	1359 to 1414	✓	✓		✓	✓
Spiral at B	78 to 2964	1422 to 1439	✓	✓		✓	✓

^aFlight legs refer to figure 6.

^bAltitude variation for constant-altitude flight legs typically less than ±15 m.

^cNo CH₄ data due to instrument malfunction.

TABLE 7.- AIRCRAFT 1 FLIGHT PARAMETERS FOR REMOTE SENSOR CALIBRATION

EXPERIMENT ON JULY 20, 1978

Flight leg or location (a)	Altitude, m (b)	Time of day, EDT	Data (c)				
			O ₃	NO/NO _x	CH ₄	T	T _{dp}
A → C	224	1159 to 1216	✓	✓		✓	✓
Spiral at C	280 to 2970	1216 to 1234	✓	✓		✓	✓
C → A	2355	1238 to 1251	✓	✓		✓	✓
Spiral at A	2326 to 68	1251 to 1308	✓	✓		✓	✓

^aFlight legs refer to figure 6.

^bAltitude variation for constant-altitude flight legs typically less than ±15 m.

^cNo CH₄ data due to instrument malfunction.

TABLE 8.- AIRCRAFT 1 FLIGHT PARAMETERS FOR PRIMARY EXPERIMENT ON JULY 21, 1978

Flight leg or location (a)	Altitude, m (b)	Time of day, EDT	Data				
			O ₃	NO/NO _x	CH ₄	T	T _{dp}
K → L	549	0854 to 0902	(c)	(c)	(c)	(c)	(c)
Spiral at L	91 to 1523	0904 to 0913	✓	✓		✓	✓
H → G	531	0924 to 0936	✓	✓		✓	✓
Spiral at E	126 to 1473	0948 to 0956	✓	✓		✓	✓
E → F	542	1002 to 1021	✓	✓		✓	✓
Spiral at B	103 to 1475	1047 to 1054	✓	✓		✓	✓
B → A	553	1058 to 1106	✓	✓		✓	✓
K → L	551	1425 to 1433	✓	✓	✓	✓	✓
Spiral at L	129 to 1490	1435 to 1444	✓	✓		✓	✓
H → G	566	1455 to 1505	✓	✓		✓	✓
Spiral at E	117 to 1492	1517 to 1524	✓	✓		✓	✓
E → F	565	1529 to 1548	✓	✓	✓	✓	✓
D → C	564	1559 to 1617	✓	✓	✓	✓	✓
E → F	570	1628 to 1647	✓	✓	✓	✓	✓
Spiral at H	570 to 1504	1701 to 1705	✓	✓		✓	✓
H → G	572	1709 to 1719	✓	✓		✓	✓

^aFlight legs refer to figure 2.

^bAltitude variation for constant-altitude flight legs typically less than ±15 m.

^cNo data.

TABLE 9.- AIRCRAFT 1 FLIGHT PARAMETERS FOR PHOTOCHEMICAL OXIDANT BOX EXPERIMENT

ON JULY 24, 1978

Flight leg or location (a)	Altitude, m (b)	Time of day, EDT	Data				
			O ₃	NO/NO _x	CH ₄	T	T _{dp}
G → H	272	0537 to 0543	✓	✓	✓	✓	✓
F → E	273	0550 to 0556	✓	✓	✓	✓	✓
C → D	273	0602 to 0610	✓	✓	✓	✓	✓
B → A	276	0612 to 0621	✓	✓	✓	✓	✓
Spiral at A	314 to 1201	0621 to 0627	✓	✓	✓	✓	✓
G → H	269	0637 to 0643	✓	✓	✓	✓	✓
F → E	265	0649 to 0656	✓	✓	✓	✓	✓
C → D	265	0701 to 0709	✓	✓	✓	✓	✓
B → A	267	0712 to 0721	✓	✓	✓	✓	✓
Spiral at A	278 to 1179	0721 to 0726	✓	✓	✓	✓	✓
F → E	278	0744 to 0751	✓	✓	✓	✓	✓
C → D	265	0756 to 0804	✓	✓	✓	✓	✓
Spiral at B	279 to 1158	0806 to 0811	✓	✓	✓	✓	✓
G → H	284	0910 to 0917	✓	✓	✓	✓	✓
F → E	283	0921 to 0928	✓	✓	✓	✓	✓
C → D	297	0932 to 0940	✓	✓	✓	✓	✓
B → A	284	0943 to 0950	✓	✓	✓	✓	✓
Spiral at A	284 to 1192	0950 to 0955	✓	✓	✓	✓	✓
G → H	269	1151 to 1157	✓	✓	✓	✓	✓
F → E	272	1201 to 1208	✓	✓	✓	✓	✓
C → D	273	1211 to 1220	✓	✓	✓	✓	✓
B → A	274	1222 to 1229	✓	✓	✓	✓	✓
Spiral at A	277 to 1180	1229 to 1235	✓	✓	✓	✓	✓
G → H	272	1419 to 1425	✓	✓	✓	✓	✓
F → E	274	1430 to 1437	✓	✓	✓	✓	✓
C → D	275	1440 to 1448	✓	✓	✓	✓	✓
B → A	275	1450 to 1457	✓	✓	✓	✓	✓
Spiral at A	276 to 1207	1457 to 1503	✓	✓	✓	✓	✓
G → H	269	1515 to 1520	✓	✓	✓	✓	✓
F → E	267	1524 to 1531	✓	✓	✓	✓	✓
C → D	268	1535 to 1543	✓	✓	✓	✓	✓
B → A	268	1544 to 1552	✓	✓	✓	✓	✓
Spiral at A	268 to 1197	1552 to 1558	✓	✓	✓	✓	✓
G → H	277	1618 to 1623	✓	✓	✓	✓	✓
Spiral at H	280 to 1868	1623 to 1632	✓	✓	✓	✓	✓

^aFlight legs refer to figure 7.

^bAltitude variation for constant-altitude flight legs typically less than ±10 m.

TABLE 10.- AIRCRAFT 1 FLIGHT PARAMETERS FOR PRIMARY EXPERIMENT

ON JULY 27, 1978

Flight leg or location (a)	Altitude, m (b)	Time of day, EDT	Data				
			O ₃	NO/NO _x	CH ₄	T	T _{dp}
K → L	603	0856 to 0903	✓	✓	✓	✓	✓
Spiral at L	139 to 1564	0908 to 0916	✓	✓	✓	✓	✓
H → G	594	0926 to 0937	✓	✓	✓	✓	✓
Spiral at E	139 to 1543	0947 to 0956	✓	✓	✓	✓	✓
E → F	602	1003 to 1024	✓	✓	✓	✓	✓
Spiral at B	191 to 1543	1051 to 1059	✓	✓	✓	✓	✓
B → A	613	1106 to 1112	✓	✓	✓	✓	✓
K → L	614	1422 to 1429	✓	✓	✓	✓	✓
Spiral at L	141 to 1562	1433 to 1440	✓	✓	✓	✓	✓
CH → G*	611	1452 to 1501	✓	✓	✓	✓	✓
Spiral at E	166 to 1532	1511 to 1519	✓	✓	✓	✓	✓
E → F	613	1524 to 1546	✓	✓	✓	✓	✓
D → C	615	1555 to 1612	✓	✓	✓	✓	✓
E → F	614	1625 to 1646	✓	✓	✓	✓	✓
Spiral at H	614 to 1566	1701 to 1706	✓	✓	✓	✓	✓
H → G	631	1712 to 1722	✓	✓	✓	✓	✓

^aFlight legs refer to figure 2.

^bAltitude variation for constant-altitude flight legs typically less than ±10 m.

^cG* is 10 km (on G → H flight line) southeast of G.

TABLE 11.- AIRCRAFT 1 FLIGHT PARAMETERS FOR GRAB SAMPLE EXPERIMENT
ON AUGUST 2, 1978

Flight leg or location (a)	Altitude, m (b)	Time of day, EDT	Data (c)					
			O ₃	NO/NO _x	CH ₄	T	T _{dp}	Hydrocarbon samples
A → B	256	0726 to 0732	✓			✓	✓	✓
D → C	258	0743 to 0752	✓			✓	✓	✓
E → F	240	0802 to 0809	✓			✓	✓	✓
H → G	263	0824 to 0830	✓			✓	✓	✓
Spiral at G	323 to 1183	0830 to 0835	✓			✓	✓	✓

^aFlight legs refer to figure 8.

^bAltitude variation for constant-altitude flight legs typically less than ±10 m.

^cNO/NO_x and CH₄ instruments removed from aircraft.

TABLE 12.- SAMPLING INSTRUMENTATION CHARACTERISTICS

Species	Technique	Range (a)	Detection limit (a)	Reference
O ₃	Chemiluminescent	5 ppb to 250 ppb	5 ppb	b5
NO/NO _x	Chemiluminescent	5 ppb to 200 ppb	5 ppb	4
CH ₄	Gas filter correlation	0.5 ppm to 10 ppm	0.5 ppm	6
Temperature	Resistance	-30° C to +30° C	<0.1° C	4
Dewpoint	Hygrometer	-100° C to +100° C	<0.1° C	4

^aFor instrument as flown in 1978 SEV-UPS experiment.

^bReference 5 addresses only the instrument itself; all other references discuss both the instrument and its installation.

TABLE 13.- INSTRUMENT CALIBRATION DATA

Species	Calibration method	Calibration range	Accuracy (a)	Response to 90 percent of scale
O ₃	Gas phase titration ^b	0 ppb to 500 ppb	±10 percent or 5 ppb ^c	1 sec
NO/NO _x	Gas phase titration ^b	0 ppb to 500 ppb	±10 percent or 5 ppb ^c	3 to 5 sec
CH ₄	Gas standard	0 ppm to 10 ppm	±10 percent or 0.2 ppm ^d	1 sec
Temperature	Liquid bath	-30° C to +30° C	±0.5° C	<1 sec
Dewpoint	Humidity chamber	-100° C to +100° C	±0.5° C	2° C/sec

^aAbsolute accuracy based on calibration accuracy.

^bGas phase titration (O₃ to NO) traceable to National Bureau of Standard NO source.

^c±10 percent of reading or 5 ppb, whichever is larger.

^d±10 percent of reading or 0.2 ppm, whichever is larger.

TABLE 14.- RESULTS OF HYDROCARBON ANALYSIS FOR GRAB SAMPLES TAKEN ON AUGUST 2, 1978

[Dash indicates species not detected]

Species	Concentration, ppb, of -											
	Zero air sample A	Zero air sample B	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Sample 7	Sample 8	Sample 9	Sample 10
Ethane	---	---	1	0.4	0.9	0.4	0.5	0.9	0.8	0.6	0.4	4.3
Ethylene	5.7	5.9	1.6	2.5	1.0	1.0	.6	1.0	1.8	1.9	1.9	3.3
Propane	---	---	---	---	---	---	---	---	---	---	---	1.3
Acetylene	---	---	---	---	---	---	---	---	---	---	---	---
Isobutane	---	---	---	---	---	---	---	---	---	---	---	---
n-butane	---	---	---	---	---	---	---	---	---	---	---	2.0
Propylene	---	---	---	---	---	---	---	---	---	---	---	---
Isopentane	---	---	---	---	---	---	---	---	---	---	---	---
1, 4-pentadiene	---	---	---	---	---	---	---	---	---	---	---	.2
n-pentane	---	---	---	---	---	---	---	---	---	.2	---	---
Isoprene + t-2-pentene	---	---	---	---	---	---	---	---	---	---	---	---
1, 3-pentadiene	---	---	---	---	---	---	---	---	---	---	---	---
2, 2-dimethylbutane	---	---	---	---	---	---	---	---	---	---	---	---
3-methylpentane	---	---	---	---	---	---	---	---	---	---	---	---
1-hexene + 2-methylpentene	---	---	---	---	---	---	---	---	---	---	---	---
n-hexane	---	---	---	---	---	---	---	---	---	---	---	---
2, 4-dimethylpentane	---	---	---	---	---	---	---	---	---	---	---	---
2-methylhexane	---	---	---	---	---	---	---	---	---	---	---	---
3-methylhexane	---	---	---	---	---	---	---	---	---	---	---	---
2, 2, 4-trimethylpentane	---	---	---	---	---	---	---	---	---	---	---	---
n-heptane	---	---	---	---	---	---	---	---	---	---	---	---
2, 5-dimethylhexane	---	---	---	---	.2	---	---	---	---	---	---	---
2, 3, 4-trimethylpentane	---	---	---	---	.6	---	---	---	---	---	---	---
2-methylheptane	---	---	---	---	---	---	---	---	---	---	---	---
3-methylheptane	---	---	---	---	---	---	---	---	---	---	---	---
n-octane	---	---	---	---	---	---	---	---	---	---	---	---
n-nonane	---	---	---	---	---	---	---	---	---	---	---	---
n-decane	---	---	---	---	---	---	---	---	---	---	---	---
Benzene	2.5	1.8	1.5	4.9	9.7	1.4	5.7	3.0	1.6	6.1	2.3	1.8
Toluene	---	---	.1	.5	1.0	<.1	<.1	<.1	.2	.1	.2	.2
Ethylbenzene	---	---	---	---	.1	---	---	---	---	---	---	---
α-pinene + p-xylene	---	---	---	---	.2	---	---	---	---	---	---	---
m-xylene	.8	.3	.2	.2	.1	.3	.3	.3	.2	.2	.4	.1
o-xylene	---	---	---	<.1	<.1	---	---	---	<.1	.2	<.1	<.1
β-pinene	---	---	---	---	---	---	---	---	---	---	---	---
n-propylbenzene	---	---	---	---	---	---	---	---	---	---	---	---
m-ethyltoluene	---	---	---	---	---	---	---	---	---	---	---	---
1, 3, 5-trimethylbenzene	---	---	---	---	---	---	---	---	---	---	---	---
t-butylbenzene	---	---	---	---	---	---	---	---	---	---	---	---
o-ethyltoluene	---	---	---	---	---	---	---	---	---	---	---	---
D + L-limonene	---	---	---	---	---	---	---	---	---	---	---	---
sec-butylbenzene	---	---	---	---	<.1	---	---	---	---	---	---	---
1, 2, 4-trimethylbenzene	---	---	---	---	---	---	---	---	---	---	---	---
1, 2, 3-trimethylbenzene	---	---	---	---	---	---	---	---	---	---	---	---
n-butylbenzene	---	---	---	---	---	---	---	---	---	---	---	---
Dichloromethane	---	a<1000	a3451	a4941	a2080	a4117	a2080	a8097	a9032	a5331	a10 316	a12 494
Freon 113	---	---	---	---	---	---	---	---	---	a<5000	---	---
Chloroform	---	---	---	---	---	---	a<40	a<40	---	a<40	---	---
1, 1, 1-trichloroethane	---	---	---	---	---	---	---	---	---	---	---	---
Carbon tetrachloride	---	---	---	---	---	---	---	---	---	---	---	---
Trichloroethene	---	---	---	---	---	---	---	---	---	---	---	---

^aConcentration in ppt.

TABLE 15.- AVERAGED DATA OVER FLIGHT LEG FOR REGIONAL TRAVERSE EXPERIMENT ON JULY 12, 1978

[Data calculated from 10-sec averaged data of appendix B]

Leg	Length of flight leg, km	Time, EDT	O ₃ , ppb (a)	NO, ppb	NO _x , ppb	CH ₄ , ppm	h, m	T, °C	T _{dp} , °C	V, m/sec
A → B	123	1296 to 1318	67 ± 5							
A → C	78	1318 to 1339	71 ± 8							
C → D	44	1339 to 1352	58 ± 10							
D → E	41	1352 to 1405	56 ± 11							
WFC → A'	66	1422 to 1437	83 ± 7							
A' → H	157	1437 to 1513	83 ± 6							

^aOnly O₃ data available due to procedural error with data system.

TABLE 16.- AVERAGED DATA OVER FLIGHT LEG FOR REGIONAL TRAVERSE EXPERIMENT ON JULY 17, 1978

[Data calculated from 10-sec averaged data of appendix B]

Leg	Length of flight leg, km	Time, EDT	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	h, m	T, °C	T _{dp} , °C	V, m/sec
K → H	105	1121 to 1147	66 ± 3	8 ± 0.9	12 ± 1	-----	301 ± 4	24 ± 0.3	18 ± 0.4	64 ± 17
H → A	69	1212 to 1229	80 ± 5	9 ± 1	13 ± 2	-----	309 ± 3	25 ± 0.2	18 ± 0.4	64 ± 14
A → E	177	1332 to 1411	93 ± 18	9 ± 1	12 ± 2	2.1 ± 0.4	324 ± 3	25 ± 1	18 ± 1	66 ± 14
WFC → L	128	1430 to 1459	90 ± 5	9 ± 2	11 ± 2	1.8 ± 0.2	331 ± 6	24 ± 0.4	18 ± 0.6	66 ± 16

TABLE 17.- AVERAGED DATA OVER FLIGHT LEG FOR REGIONAL TRAVERSE EXPERIMENT ON JULY 18, 1978

[Data calculated from 10-sec averaged data of appendix B]

Leg	Length of flight leg, km	Time, EDT	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	h, m	T, °C	T _{dp} , °C	V, m/sec
K → H	105	1126 to 1152	65 ± 4	7 ± 2	7 ± 1	-----	411 ± 3	25 ± 0.6	20 ± 0.6	64 ± 18
H → A	69	1210 to 1226	72 ± 6	7 ± 1	7 ± 1	-----	419 ± 3	28 ± 0.1	19 ± 0.6	68 ± 18
A → E	177	1333 to 1412	85 ± 11	7 ± 1	8 ± 2	1.9 ± 0.3	441 ± 3	26 ± 0.3	16 ± 0.2	66 ± 12
WFC → L	128	1433 to 1503	86 ± 10	8 ± 2	8 ± 2	1.8 ± 0.6	440 ± 2	25 ± 0.4	18 ± 0.8	64 ± 10

TABLE 18.- AVERAGED DATA OVER FLIGHT LEG FOR REMOTE SENSOR CALIBRATION EXPERIMENT ON JULY 19, 1978

[Data calculated from 10-sec averaged data of appendix B]

Leg	Length of flight leg, km	Time, EDT	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (a)	h, m	T, °C	T _{dp} , °C	V, m/sec
B → C	38	1258 to 1307	53 ± 15	9 ± 2	8 ± 3	---	2368 ± 18	15 ± 1	-18 ± 10	62 ± 19
C → A	61	1310 to 1323	76 ± 2	9 ± 1	8 ± 1	---	1439 ± 5	16 ± 0.2	10 ± 0.3	64 ± 12
A → C	61	1325 to 1341	92 ± 7	9 ± 1	8 ± 1	---	833 ± 5	21 ± 0.3	12 ± 2	64 ± 14
C → A	61	1343 to 1357	89 ± 6	8 ± 2	7 ± 2	---	537 ± 13	23 ± 0.6	16 ± 2	64 ± 16
A → C	61	1359 to 1414	80 ± 11	9 ± 1	7 ± 2	---	236 ± 3	25 ± 1	19 ± 0.8	64 ± 14

^aNo CH₄ data due to instrument malfunction.

TABLE 19.- AVERAGED DATA OVER FLIGHT LEG FOR REMOTE SENSOR CALIBRATION

EXPERIMENT ON JULY 20, 1978

[Data calculated from 10-sec averaged data of appendix B]

Leg	Length of flight leg, km	Time, EDT	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm (a)	h, m	T, °C	T _{dp} , °C	V, m/sec
A → C	61	1159 to 1216	54 ± 7	6 ± 1	2 ± 1	---	224 ± 3	24 ± 0.5	20 ± 0.5	62 ± 12
C → A	61	1238 to 1251	29 ± 2	5 ± 1	9 ± 1	---	2355 ± 4	14 ± 0.3	8 ± 0.5	62 ± 10

^aNo CH₄ data due to instrument malfunction.

TABLE 20.- AVERAGED DATA OVER FLIGHT LEG FOR PRIMARY EXPERIMENT ON JULY 21, 1978

[Data calculated from 10-sec averaged data of appendix B]

Leg	Length of flight leg, km	Time, EDT	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	h, m	T, °C	T _{dp} , °C	V, m/sec
^a K → L	30	0854 to 0902	-----	-----	-----	-----	-----	-----	-----	-----
H → G	42	0924 to 0936	84 ± 15	7 ± 1	11 ± 2	-----	531 ± 1	25 ± 0.4	17 ± 1	64 ± 10
E → F	80	1002 to 1021	67 ± 15	8 ± 1	8 ± 1	-----	542 ± 2	25 ± 0.4	16 ± 1	62 ± 11
B → A	32	1058 to 1106	62 ± 7	8 ± 1	11 ± 2	-----	553 ± 2	24 ± 0.3	18 ± 1	63 ± 17
K → L	30	1425 to 1433	83 ± 4	8 ± 1	10 ± 0.8	1.8 ± 0.1	551 ± 11	27 ± 0.2	16 ± 0.9	62 ± 17
H → G	42	1455 to 1505	137 ± 7	9 ± 1	17 ± 2	-----	566 ± 5	26 ± 0.4	16 ± 1	62 ± 16
E → F	80	1529 to 1548	109 ± 5	8 ± 2	12 ± 2	1.8 ± 0.7	565 ± 2	26 ± 0.3	16 ± 1	62 ± 13
D → C	70	1559 to 1617	100 ± 5	7 ± 2	10 ± 1	1.8 ± 0.7	564 ± 2	26 ± 0.4	16 ± 1	63 ± 9
E → F	80	1628 to 1647	110 ± 11	7 ± 1	10 ± 2	1.6 ± 0.3	570 ± 2	27 ± 0.3	16 ± 1	63 ± 12
H → G	42	1709 to 1719	113 ± 15	7 ± 2	13 ± 2	-----	572 ± 3	27 ± 0.5	16 ± 1	65 ± 19

^aDue to procedural error, only partial data for leg available; statistical analysis not performed.

TABLE 21.- AVERAGED DATA OVER FLIGHT LEG FOR PHOTOCHEMICAL OXIDANT BOX EXPERIMENT ON JULY 24, 1978

[Data calculated from 10-sec averaged data of appendix B]

Leg	Length of flight leg, km	Time, EDT	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	h, m	T, °C	T _{dp} , °C	V, m/sec
G → H	22	0537 to 0543	44 ± 3	9 ± 1	9 ± 1	2.1 ± 0.2	272 ± 1	29 ± 0.3	22 ± 0.3	61 ± 7
F → E	28	0550 to 0556	46 ± 3	8 ± 1	11 ± 1	2.0 ± 0.1	273 ± 1	28 ± 0.3	22 ± 0.2	62 ± 9
C → D	30	0602 to 0610	44 ± 4	7 ± 1	11 ± 2	1.9 ± 0.2	273 ± 2	28 ± 0.3	22 ± 0.1	62 ± 8
B → A	30	0612 to 0621	48 ± 2	7 ± 1	9 ± 2	1.8 ± 0.5	276 ± 7	28 ± 0.2	22 ± 0.7	62 ± 10
G → H	22	0637 to 0643	53 ± 3	8 ± 1	8 ± 2	1.8 ± 0.3	269 ± 18	29 ± 0.5	22 ± 0.6	59 ± 15
F → E	28	0649 to 0656	51 ± 3	7 ± 1	8 ± 2	2.0 ± 0.4	265 ± 2	28 ± 0.5	22 ± 1	61 ± 10
C → D	30	0701 to 0709	44 ± 3	7 ± 1	9 ± 1	2.1 ± 0.6	265 ± 2	28 ± 0.5	22 ± 0.5	61 ± 9
B → A	30	0712 to 0721	46 ± 4	8 ± 1	10 ± 1	2.1 ± 0.2	267 ± 2	28 ± 0.5	22 ± 0.3	61 ± 12
F → E	28	0744 to 0751	47 ± 7	9 ± 2	12 ± 2	2.3 ± 0.5	278 ± 28	27 ± 0.6	22 ± 1	63 ± 18
C → D	30	0756 to 0804	44 ± 9	11 ± 10	15 ± 11	2.4 ± 0.4	265 ± 2	27 ± 0.5	22 ± 0.8	62 ± 10
G → H	22	0910 to 0917	67 ± 3	8 ± 1	11 ± 2	2.1 ± 0.3	284 ± 10	27 ± 0.3	20 ± 0.8	62 ± 9
F → E	28	0921 to 0928	68 ± 5	10 ± 2	15 ± 4	2.4 ± 0.3	283 ± 5	27 ± 0.5	21 ± 2	62 ± 11
C → D	30	0932 to 0940	67 ± 7	10 ± 2	16 ± 4	2.3 ± 0.2	297 ± 26	27 ± 0.7	22 ± 2	63 ± 10
B → A	30	0943 to 0950	70 ± 4	10 ± 2	13 ± 2	-----	284 ± 14	27 ± 0.6	22 ± 2	62 ± 8
G → H	22	1151 to 1157	86 ± 4	10 ± 1	9 ± 1	2.1 ± 0.3	269 ± 2	26 ± 0.3	22 ± 0.6	63 ± 11
F → E	28	1201 to 1208	87 ± 3	10 ± 1	10 ± 3	2.0 ± 0.4	272 ± 2	27 ± 0.2	22 ± 0.5	63 ± 11
C → D	30	1211 to 1220	90 ± 6	10 ± 2	14 ± 3	2.0 ± 0.2	273 ± 3	27 ± 0.4	20 ± 1	63 ± 10
B → A	30	1222 to 1229	96 ± 4	10 ± 1	13 ± 3	-----	274 ± 2	28 ± 0.5	21 ± 0.8	63 ± 11
G → H	22	1419 to 1425	95 ± 3	10 ± 1	8 ± 1	2.0 ± 0.3	272 ± 1	27 ± 0.2	19 ± 0.6	63 ± 5
F → E	28	1430 to 1437	100 ± 7	9 ± 1	9 ± 2	-----	274 ± 3	27 ± 0.8	21 ± 1	64 ± 13
C → D	30	1440 to 1448	97 ± 5	9 ± 1	10 ± 2	2.3 ± 0.7	275 ± 3	27 ± 0.5	21 ± 1	63 ± 10
B → A	30	1450 to 1457	100 ± 7	9 ± 1	10 ± 2	2.3 ± 0.4	275 ± 2	28 ± 0.3	21 ± 0.8	64 ± 12
G → H	22	1515 to 1520	104 ± 5	9 ± 1	7 ± 1	1.8 ± 0.2	269 ± 6	26 ± 0.1	19 ± 0.5	62 ± 14
F → E	28	1524 to 1531	107 ± 4	8 ± 1	8 ± 2	1.7 ± 0.1	267 ± 1	27 ± 0.6	21 ± 0.3	62 ± 9
C → D	30	1535 to 1543	104 ± 4	9 ± 1	11 ± 3	1.7 ± 0.1	268 ± 2	27 ± 0.5	22 ± 0.4	62 ± 11
B → A	30	1544 to 1552	102 ± 8	8 ± 1	11 ± 3	1.7 ± 0.5	268 ± 3	28 ± 0.5	21 ± 1	63 ± 14
G → H	22	1618 to 1623	103 ± 2	9 ± 2	8 ± 2	-----	277 ± 2	27 ± 0.3	20 ± 0.6	65 ± 16

TABLE 22.- AVERAGED DATA OVER FLIGHT LEG FOR PRIMARY EXPERIMENT ON JULY 27, 1978

[Data calculated from 10-sec averaged data of appendix B]

Leg	Length of flight leg, km	Time, EDT	O ₃ , ppb	NO, ppb	NO _x , ppb	CH ₄ , ppm	h, m	T, °C	T _{dp} , °C	V, m/sec
K → L	30	0856 to 0903	67 ± 5	14 ± 2	12 ± 2	1.8 ± 0.4	603 ± 10	25 ± 0.1	19 ± 1	61 ± 9
H → G	42	0926 to 0937	73 ± 5	7 ± 1	7 ± 1	1.6 ± 0.6	594 ± 2	25 ± 0.1	19 ± 0.6	60 ± 10
E → F	80	1003 to 1024	72 ± 6	6 ± 1	7 ± 1	1.8 ± 0.5	602 ± 2	25 ± 0.3	19 ± 1	59 ± 12
B → A	32	1106 to 1112	75 ± 4	6 ± 2	6 ± 1	-----	613 ± 2	25 ± 0.2	19 ± 0.4	60 ± 8
K → L	30	1422 to 1429	64 ± 3	9 ± 1	5 ± 1	-----	614 ± 21	26 ± 0.2	21 ± 0.5	59 ± 18
^a H → G*	42	1452 to 1501	76 ± 3	7 ± 1	5 ± 2	-----	611 ± 3	26 ± 0.2	21 ± 0.3	61 ± 13
E → F	80	1524 to 1546	91 ± 8	8 ± 1	5 ± 2	-----	613 ± 3	26 ± 0.2	21 ± 0.5	61 ± 13
D → C	70	1555 to 1612	103 ± 9	2 ± 1	0 ± 2	-----	615 ± 1	26 ± 0.1	21 ± 0.5	60 ± 9
E → F	80	1625 to 1646	84 ± 6	2 ± 1	0 ± 2	-----	614 ± 2	27 ± 0.2	21 ± 0.5	61 ± 11
H → G	42	1712 to 1722	65 ± 5	1 ± 1	0 ± 2	-----	631 ± 10	27 ± 0.3	19 ± 0.2	62 ± 14

^ag* is 10 km (on G → H flight line) southeast of point G.

TABLE 23.- AVERAGED DATA OVER FLIGHT LEG FOR GRAB SAMPLE EXPERIMENT ON AUGUST 2, 1978

[Data calculated from 10-sec averaged data of appendix B]

Leg	Length of flight leg, km	Time, EDT	O ₃ , ppb	NO, ppb (a)	NO _x , ppb (a)	CH ₄ , ppm (a)	h, m	T, °C	T _{dp} , °C	V, m/sec
A → B	27	0726 to 0732	30 ± 4	----	----	----	256 ± 2	25 ± 0.1	22 ± 0.3	62 ± 15
D → C	34	0743 to 0752	35 ± 3	----	----	----	258 ± 2	25 ± 0.1	22 ± 0.6	59 ± 9
E → F	40	0802 to 0809	35 ± 2	----	----	----	240 ± 4	25 ± 0.4	23 ± 0.1	61 ± 20
H → G	30	0824 to 0830	30 ± 2	----	----	----	263 ± 11	25 ± 0.2	22 ± 0.1	60 ± 17

^aNO/NO_x and CH₄ instruments not operated.

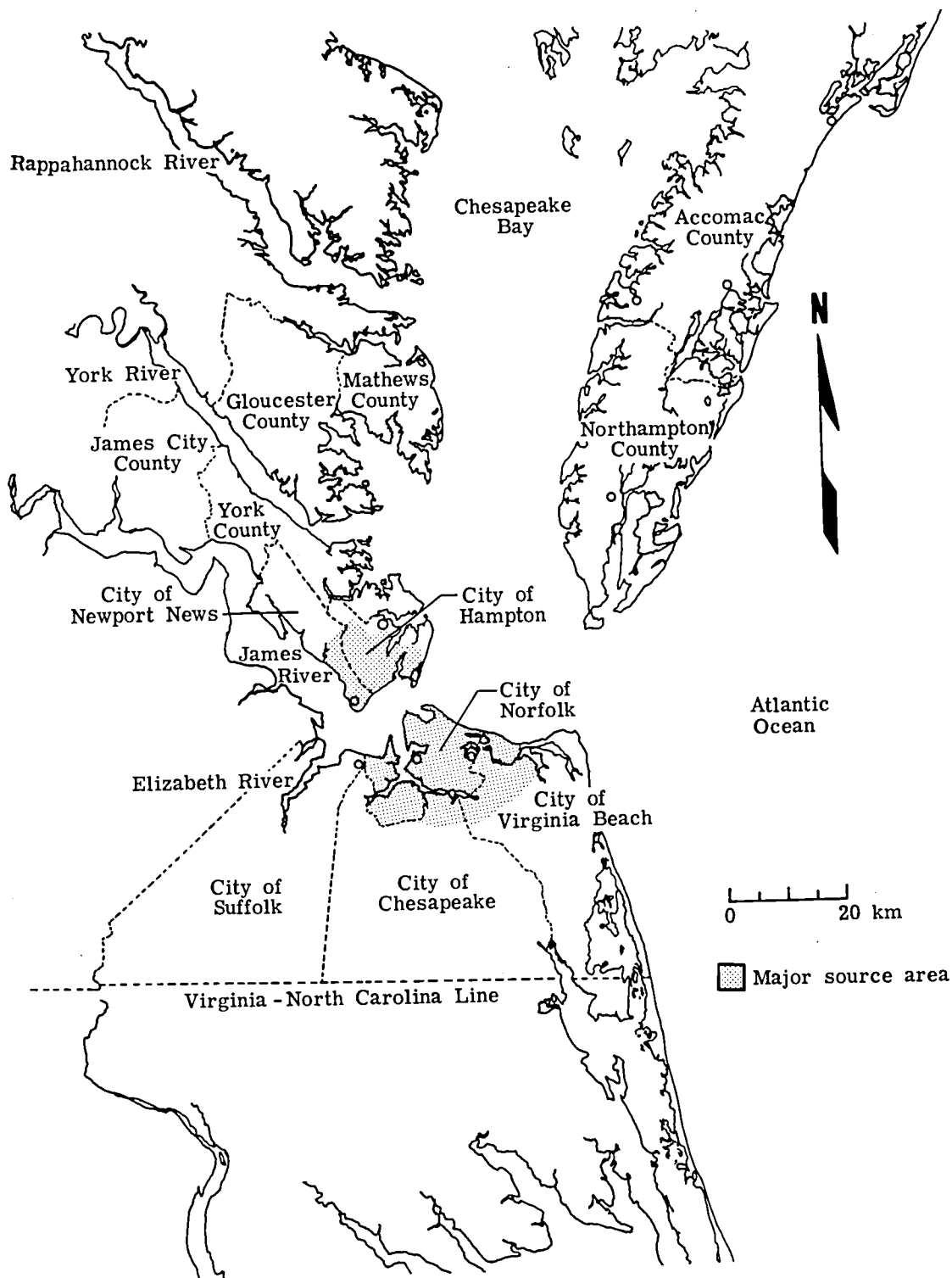


Figure 1.- Southeastern Virginia area.

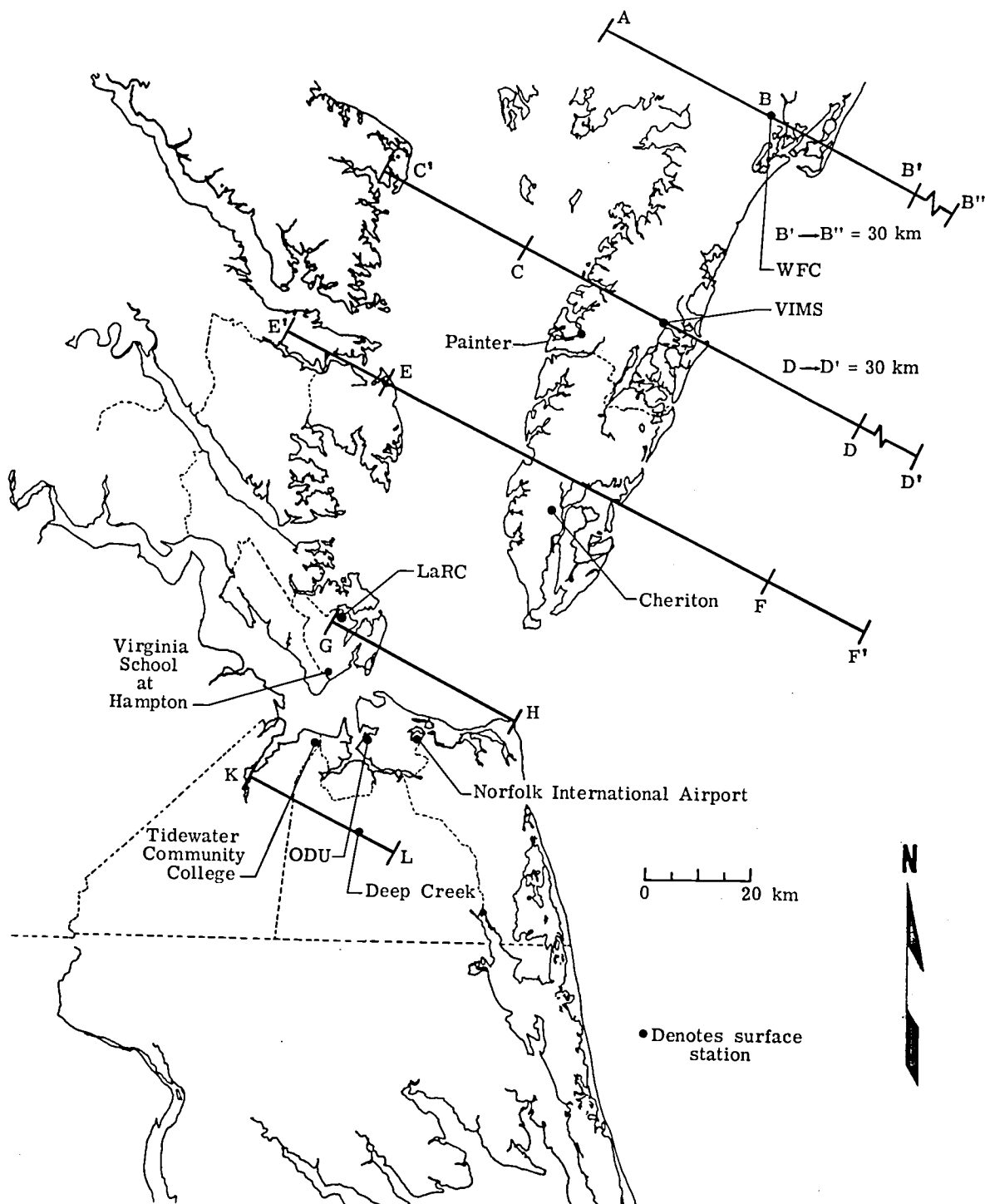


Figure 2.— Test region for primary experiment.

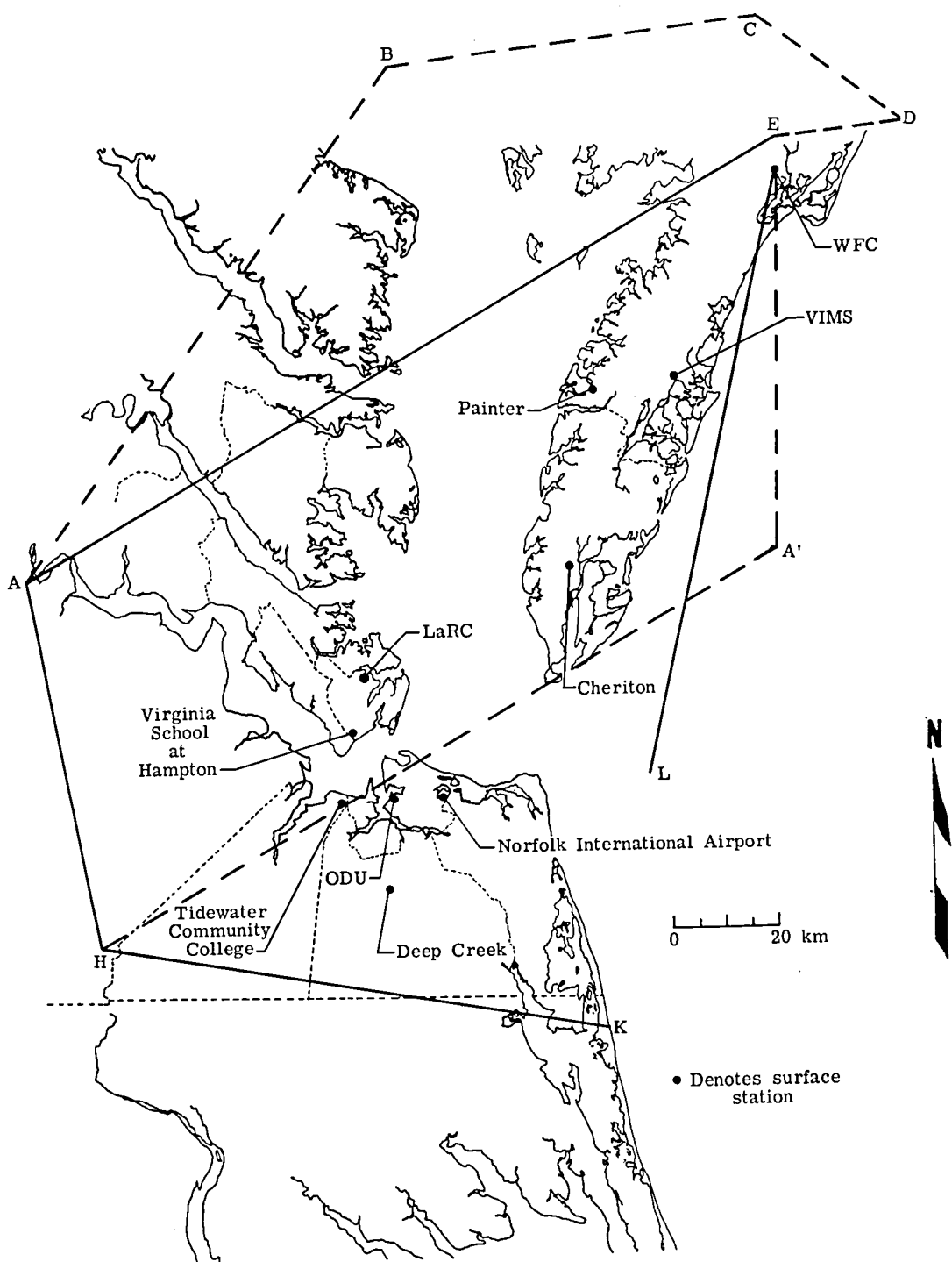


Figure 3.- Test region for regional traverse experiment. Flight sequence for July 12: A → B → C → D → E; WFC → A' → H. Flight sequence for July 17 and 18: K → H → A → E; WFC → L.

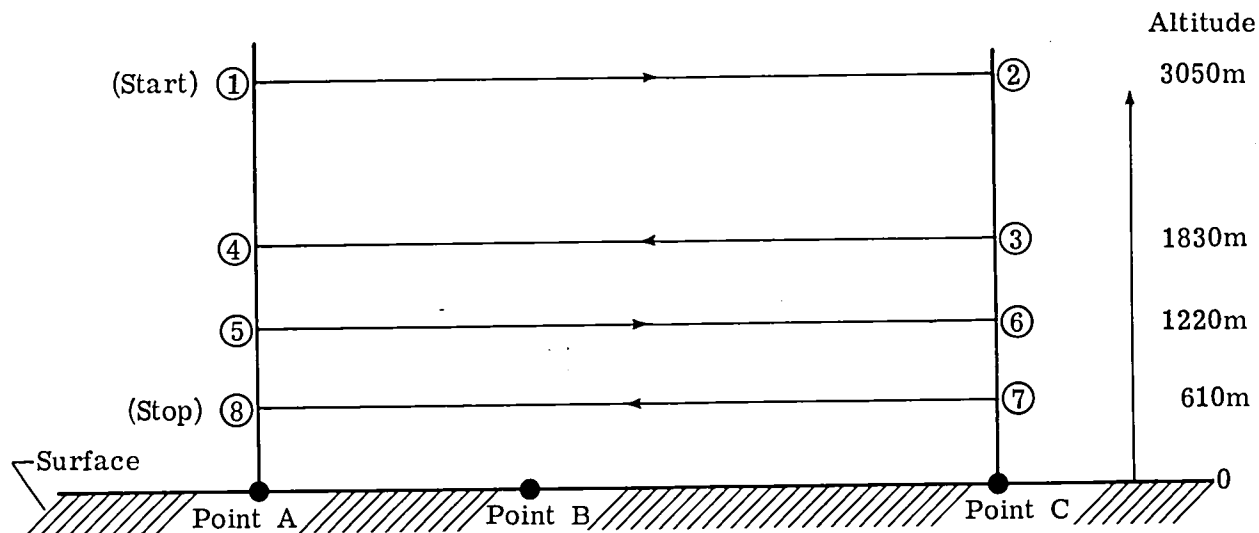


Figure 4.- Sampling plan of remote O₃ aircraft for remote sensor calibration experiment.

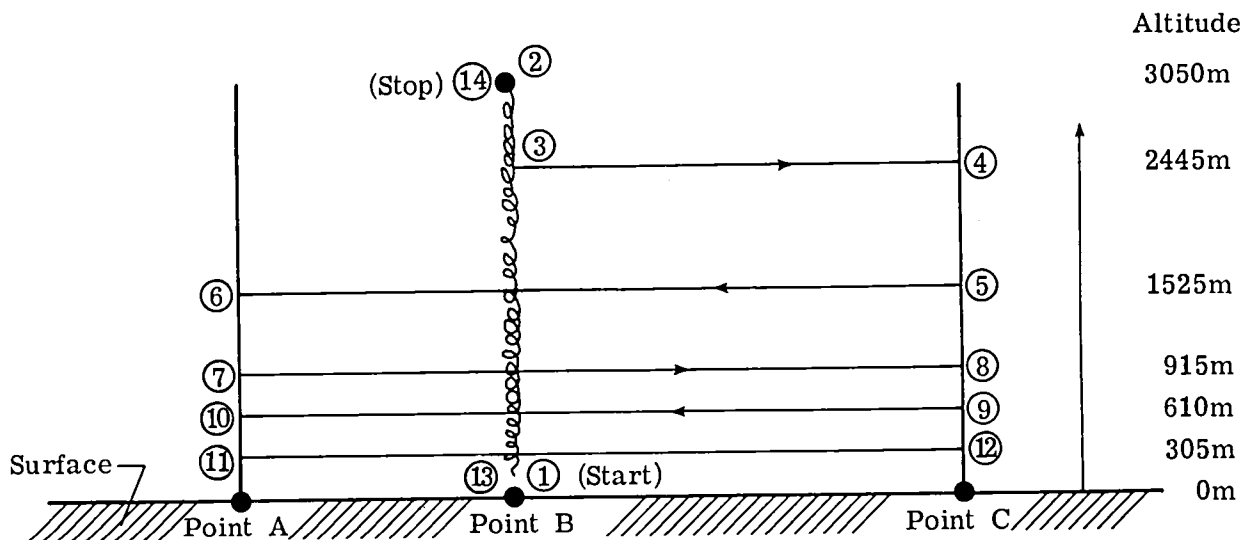


Figure 5.- Sampling plan of in situ O₃ aircraft for remote sensor calibration experiment.

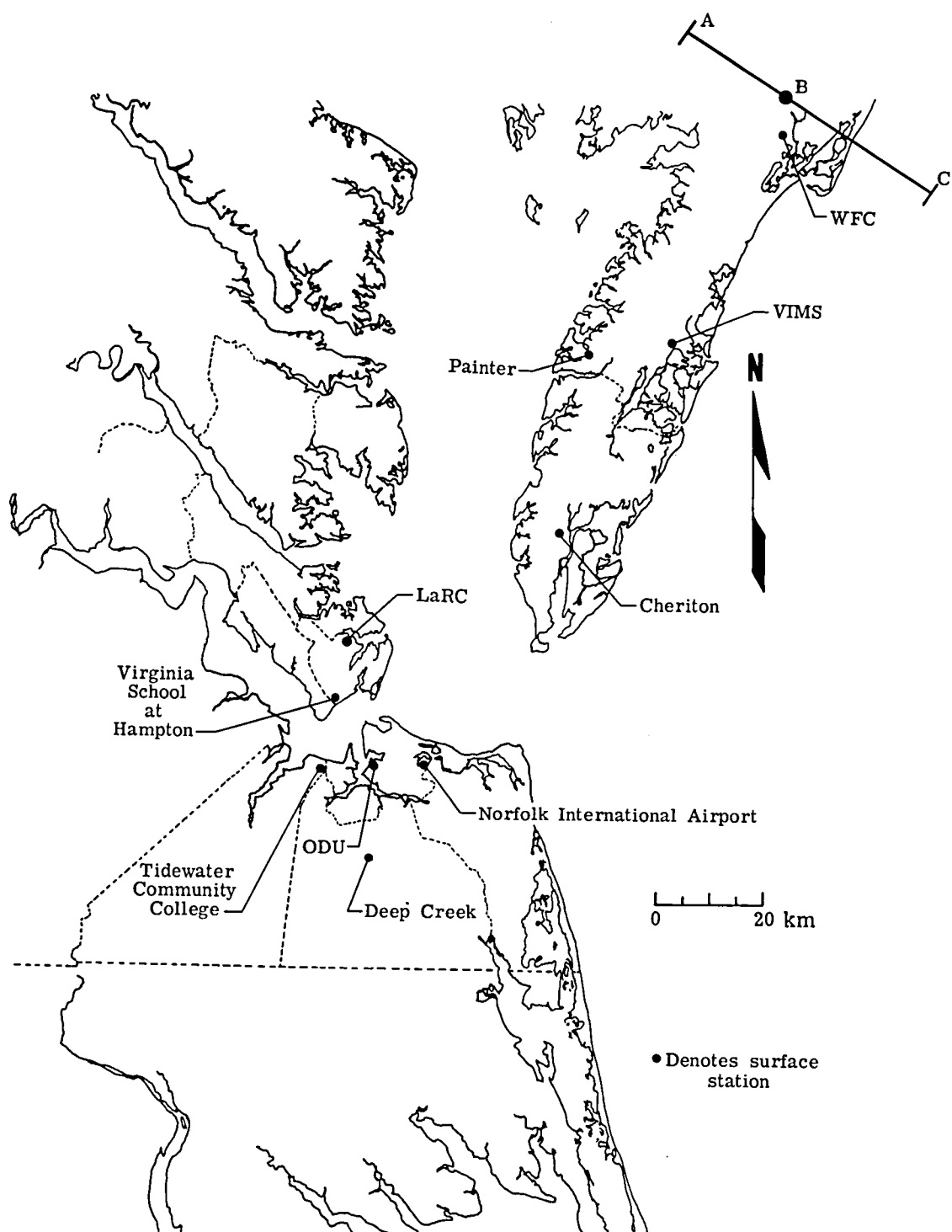


Figure 6.- Test region for remote sensor calibration experiment.

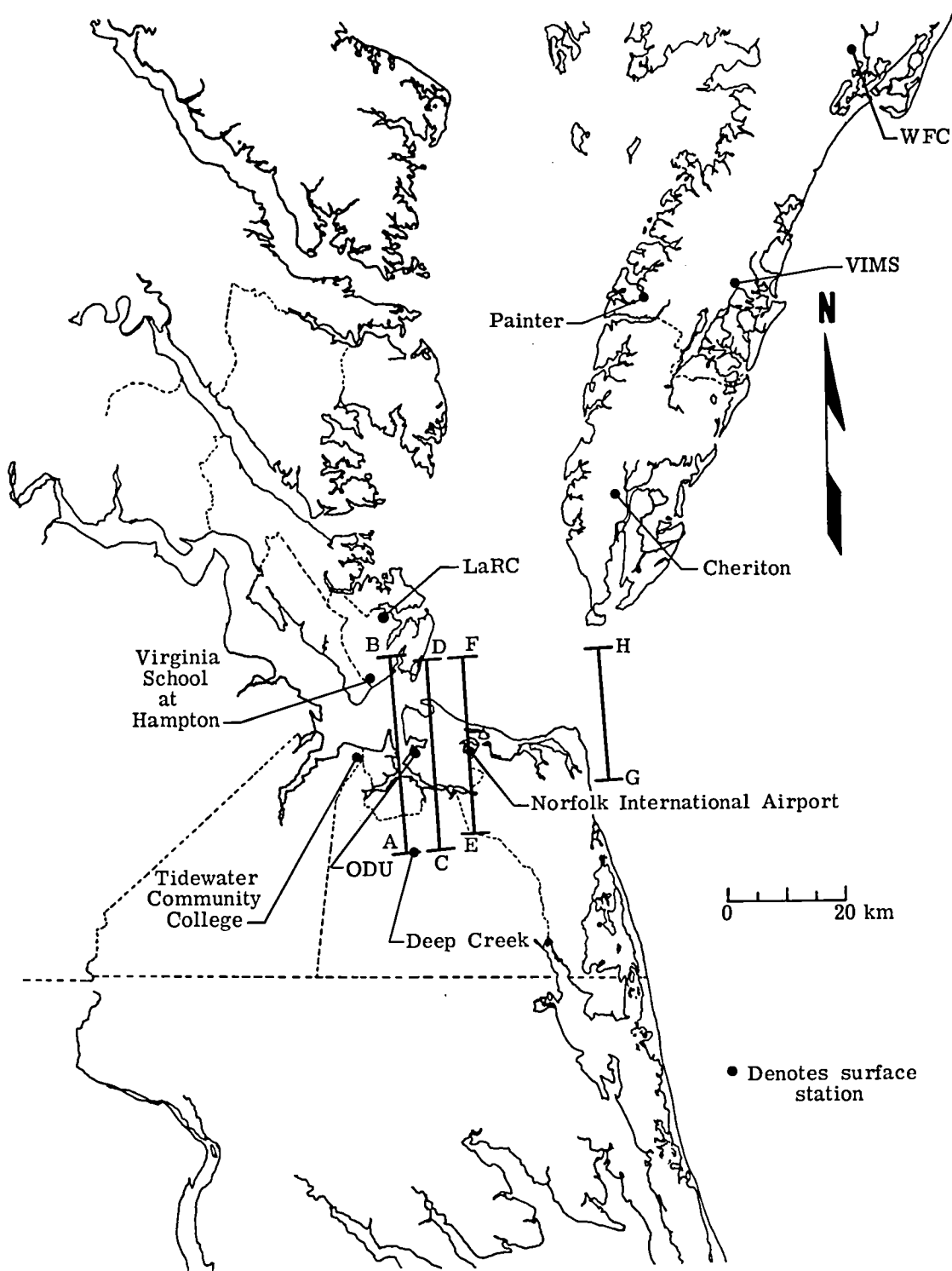


Figure 7.- Test region for photochemical oxidant box experiment.

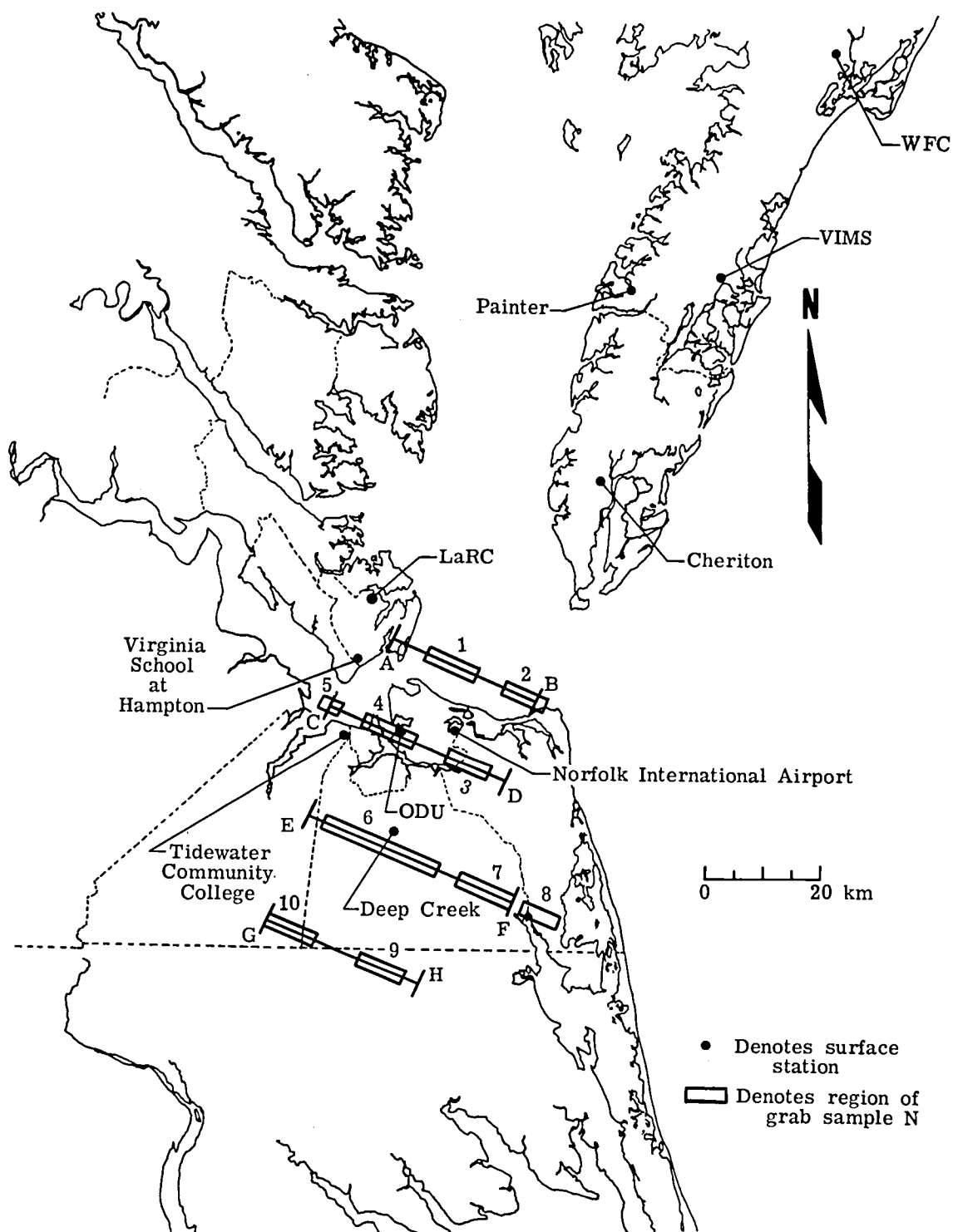


Figure 8.- Test region for hydrocarbon grab sample experiment.

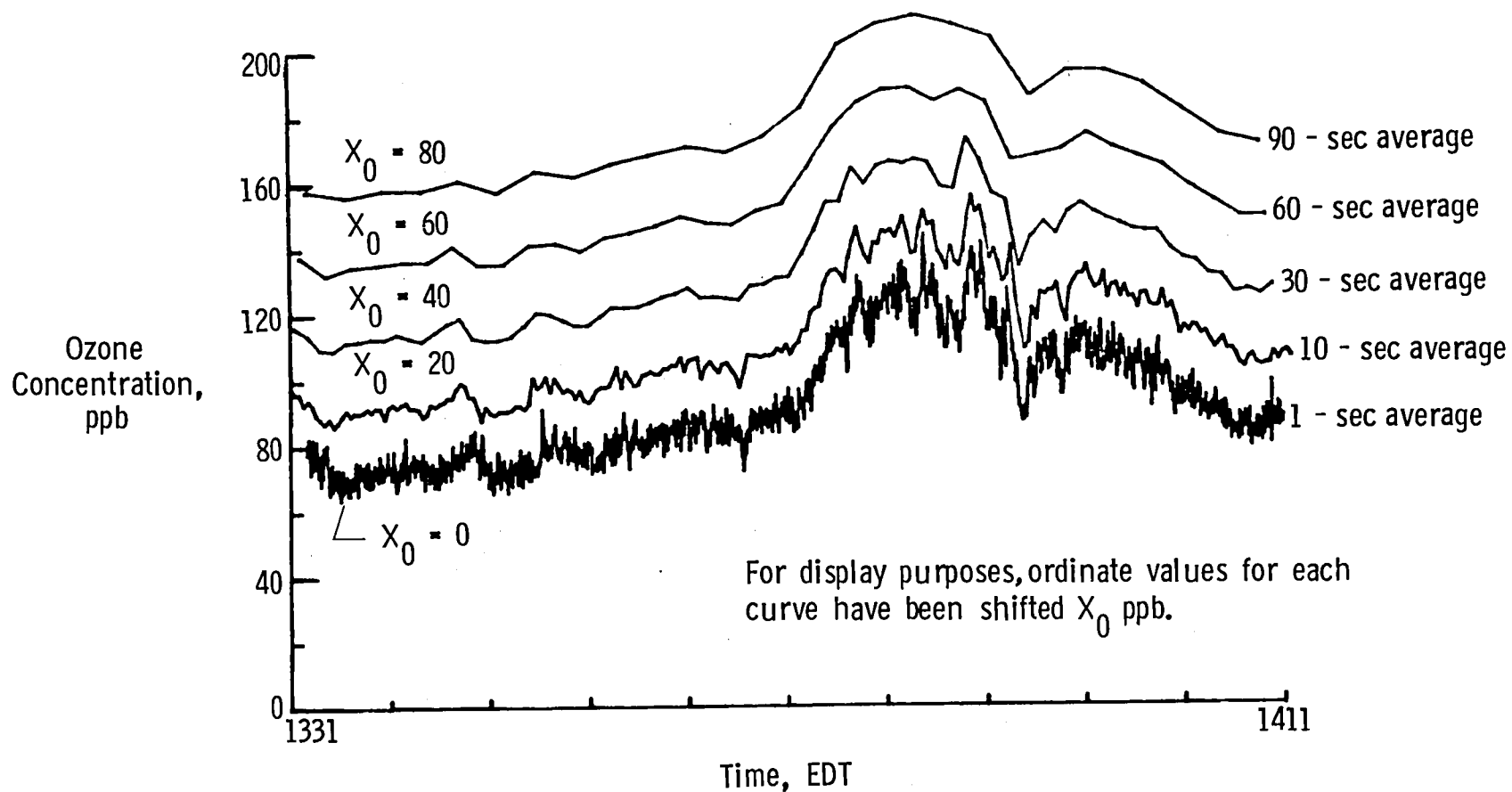


Figure 9.- Effect of averaging time on ozone data results for leg A → E on July 17, 1978.

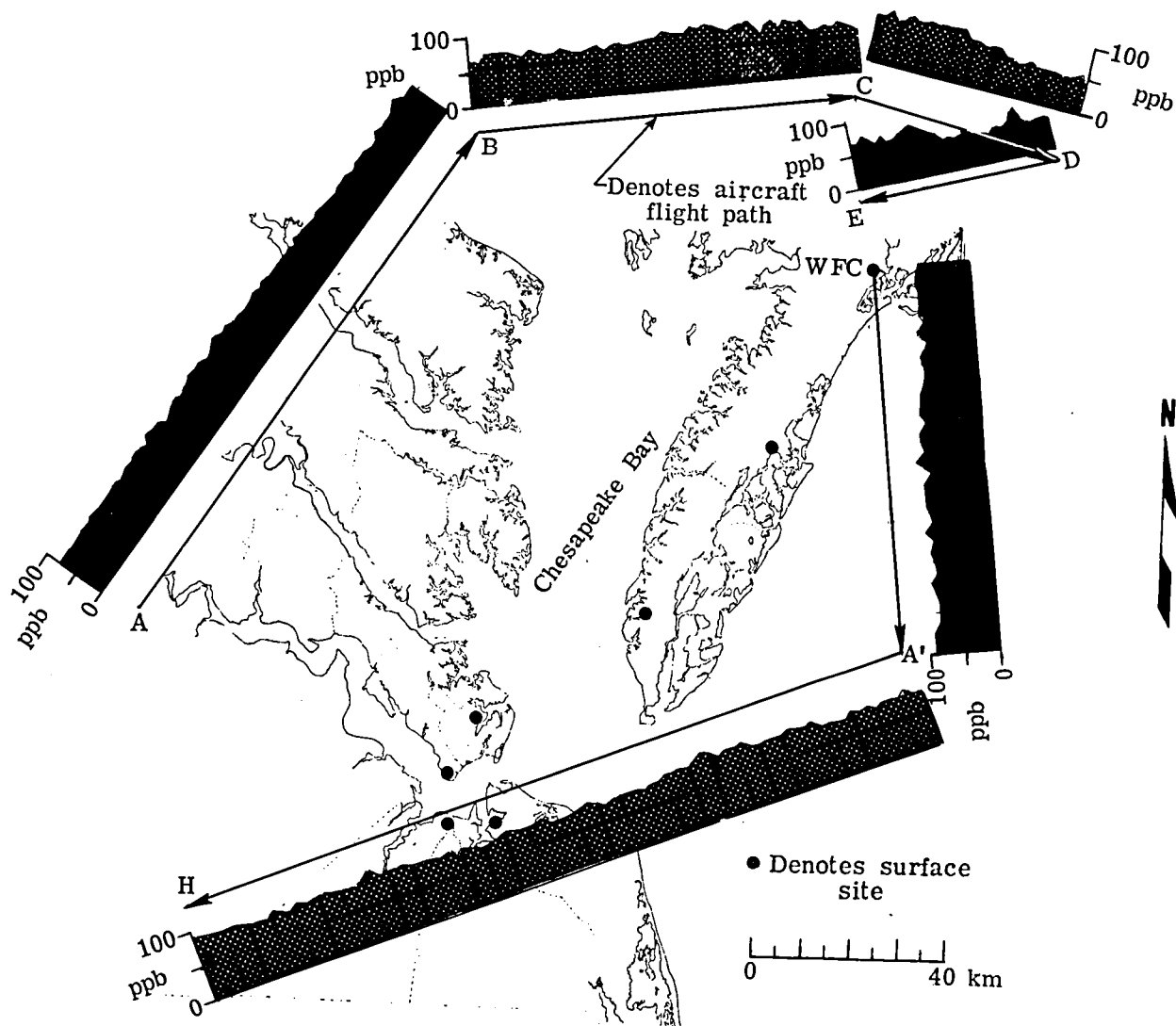


Figure 10.- Ozone data for regional traverse experiment on July 12, 1978.

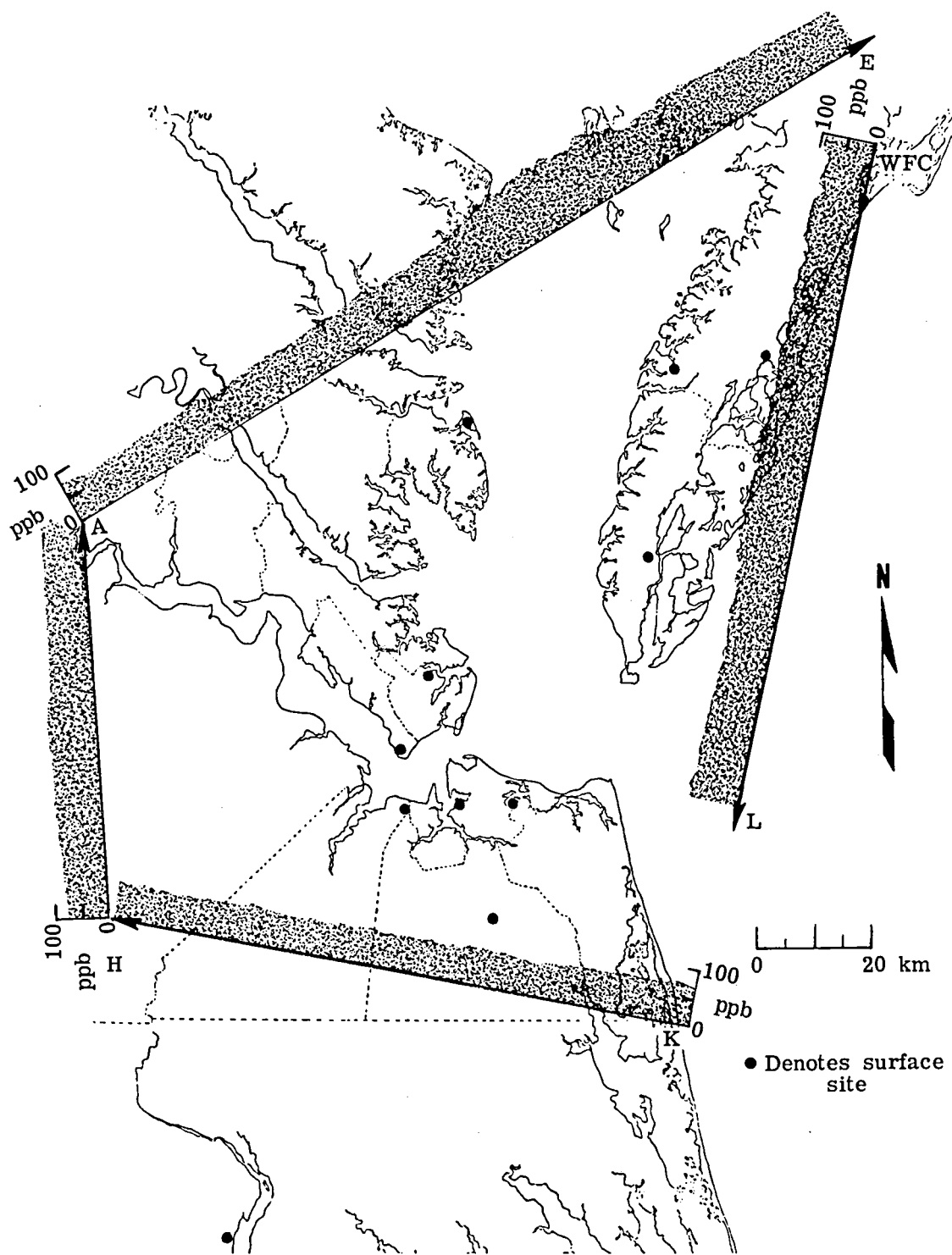


Figure 11.- Ozone data for regional traverse experiment on July 17, 1978.

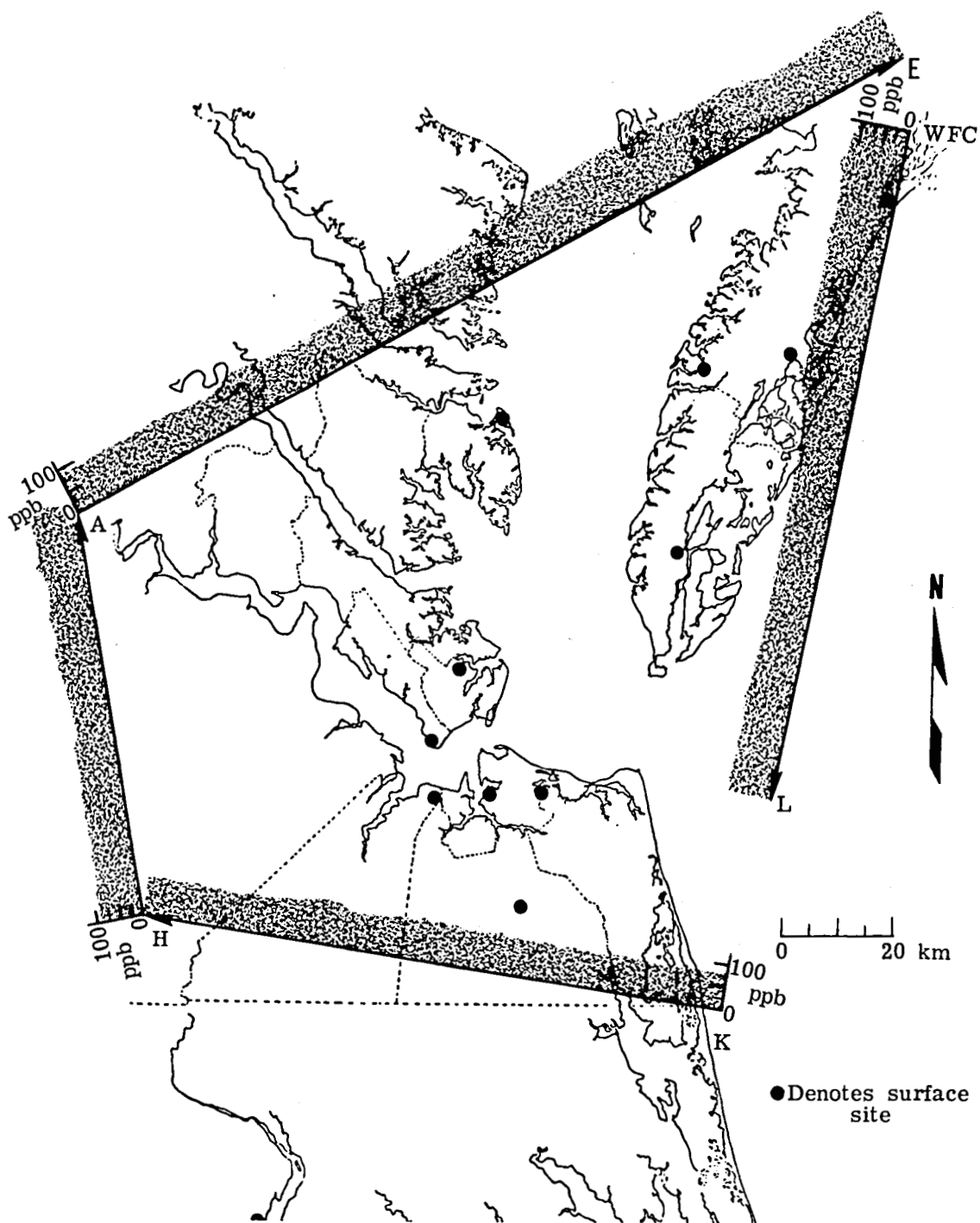


Figure 12.- Ozone data for regional traverse experiment on July 18, 1978.

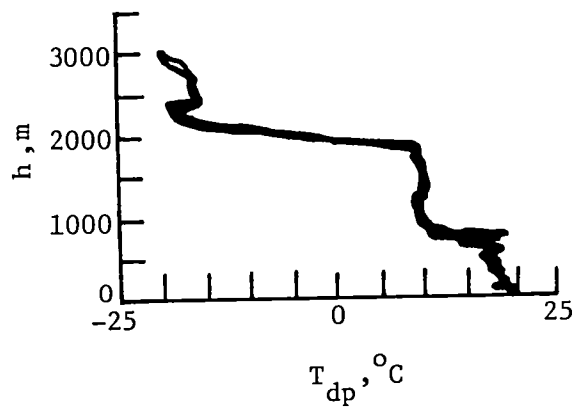
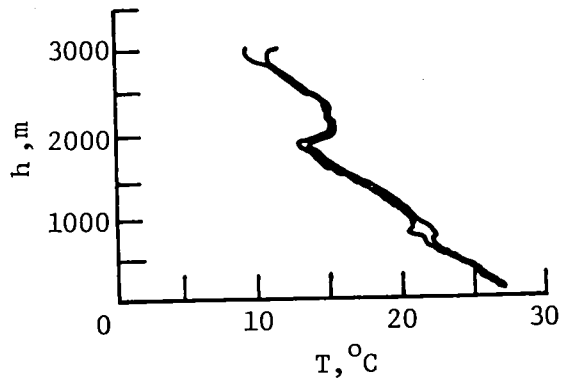
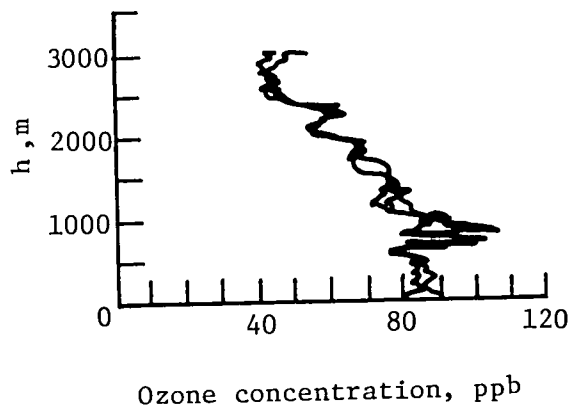


Figure 13.- Comparison of altitude profile data at point B on July 19, 1978.
Spiral 1 at 1236 to 1255 EDT; spiral 2 at 1422 to 1439 EDT.

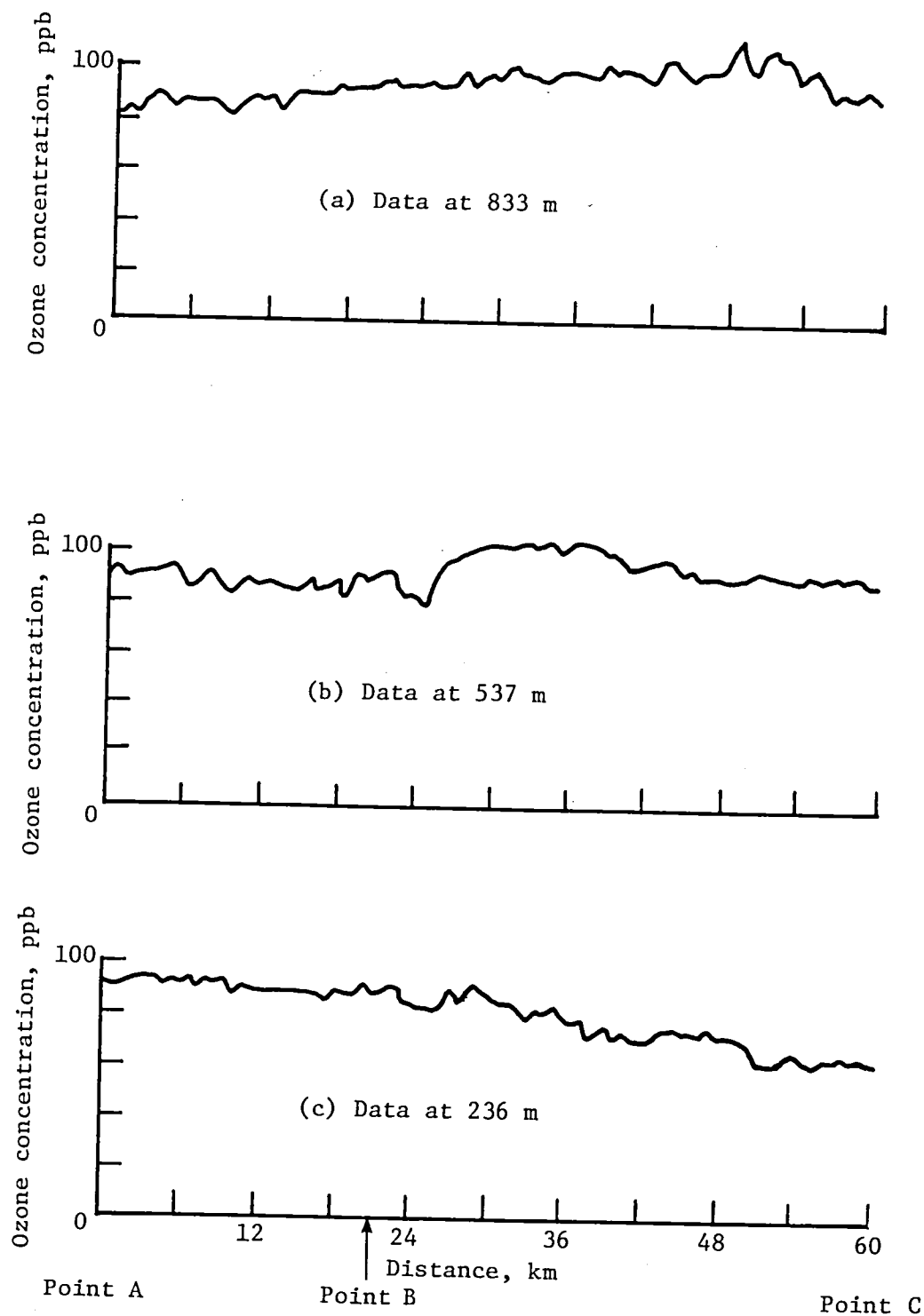


Figure 14.- Ozone data at constant altitude for leg A → C on July 19, 1978.

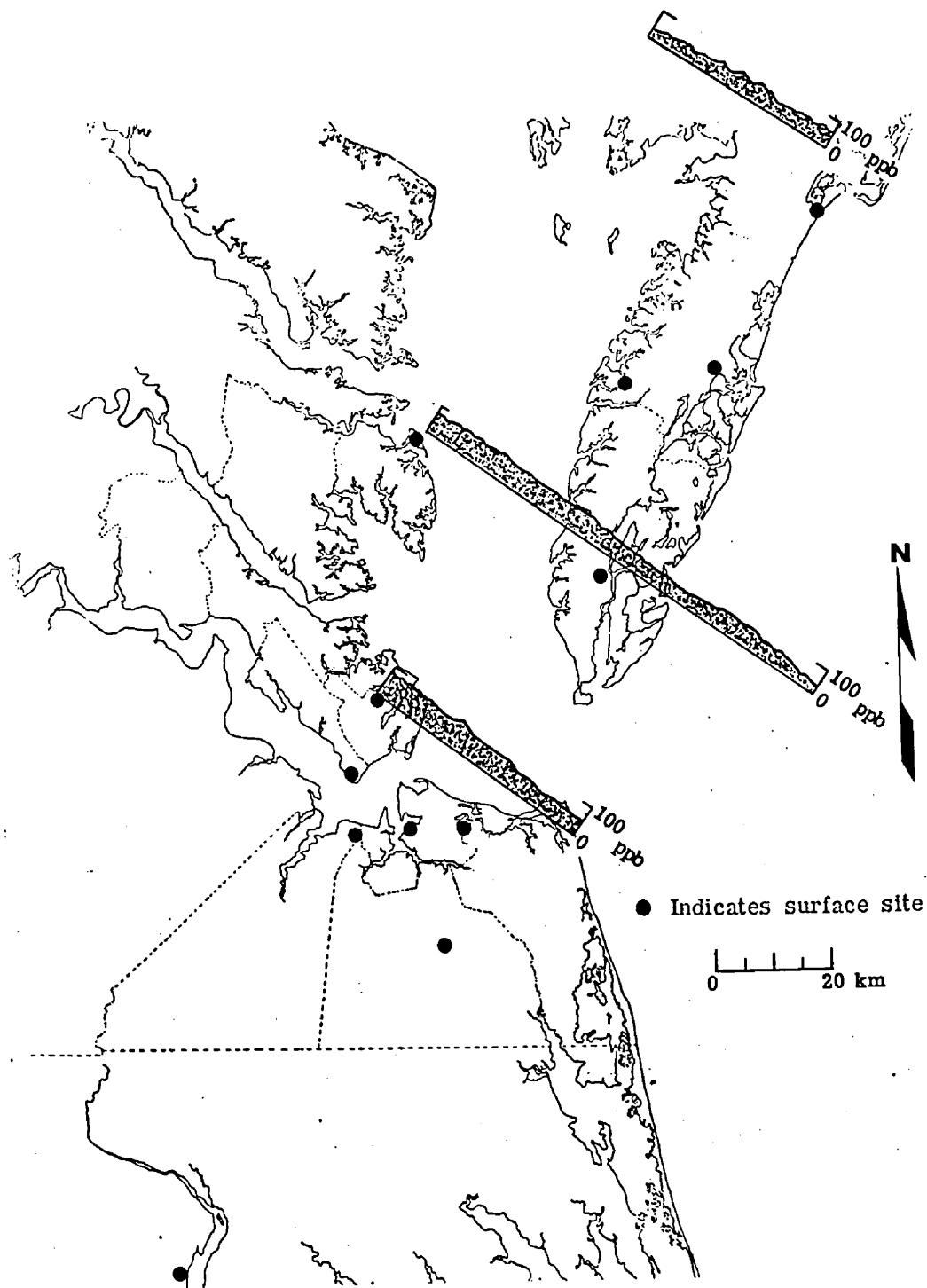


Figure 15.- Ozone data on morning of July 21, 1978.

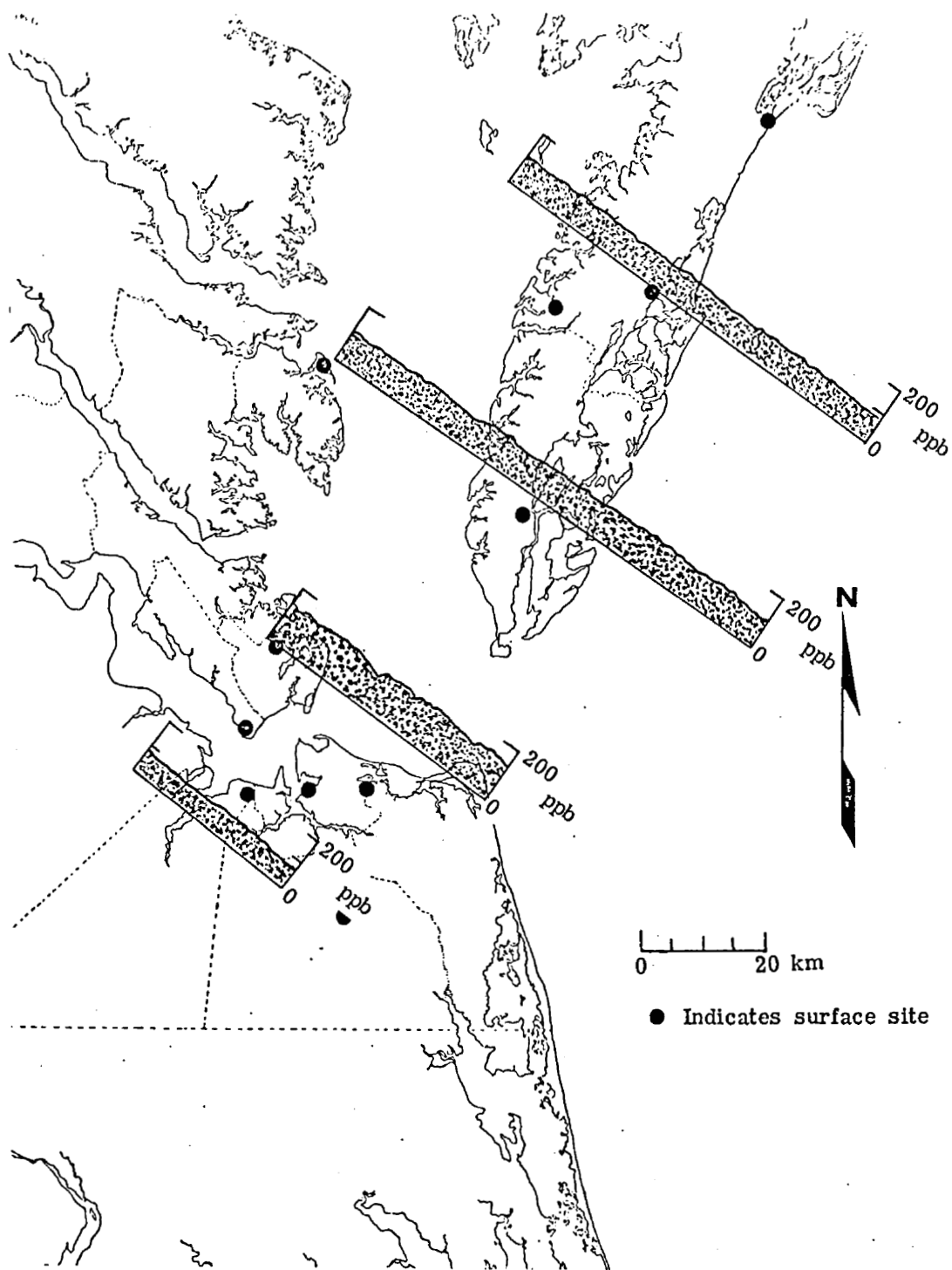


Figure 16.- Ozone data on afternoon of July 21, 1978.

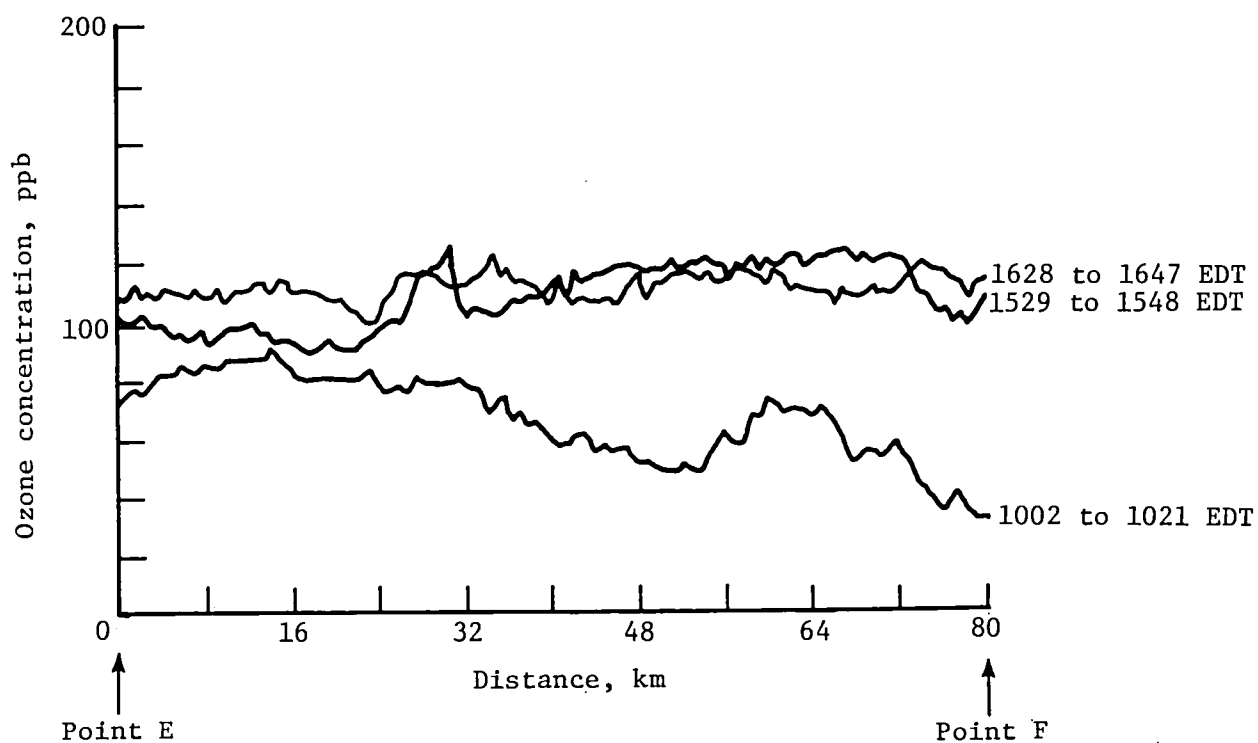
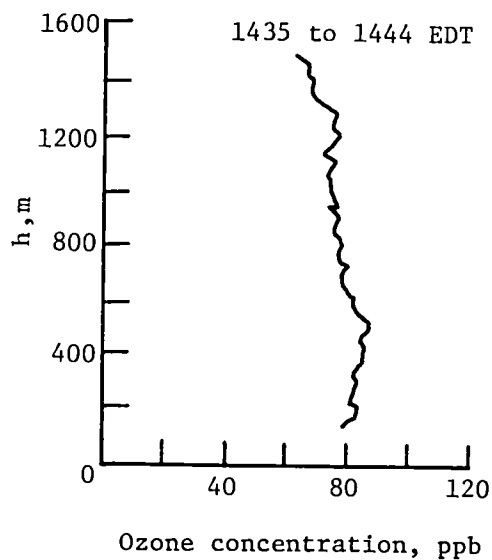
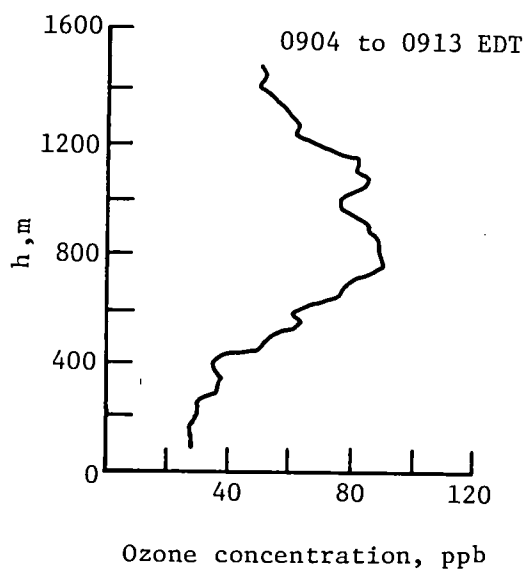
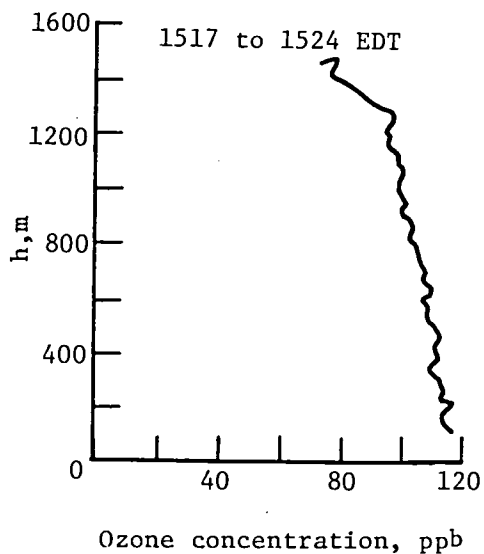
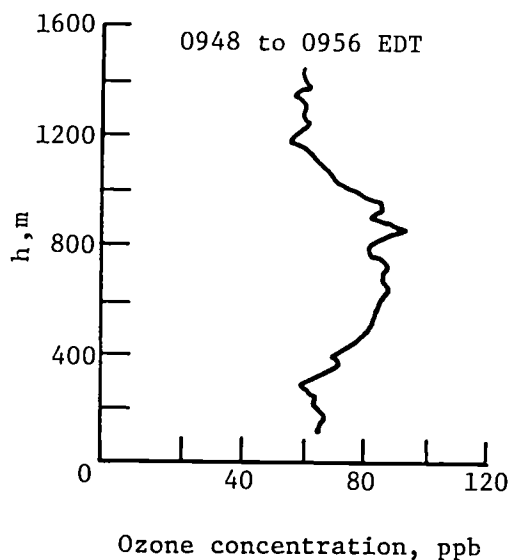


Figure 17.- Ozone data for leg E → F at 560-m altitude on July 21, 1978.



(a) Point L.



(b) Point E.

Figure 18.- Ozone profiles at points E and L for primary experiment on July 21, 1978.

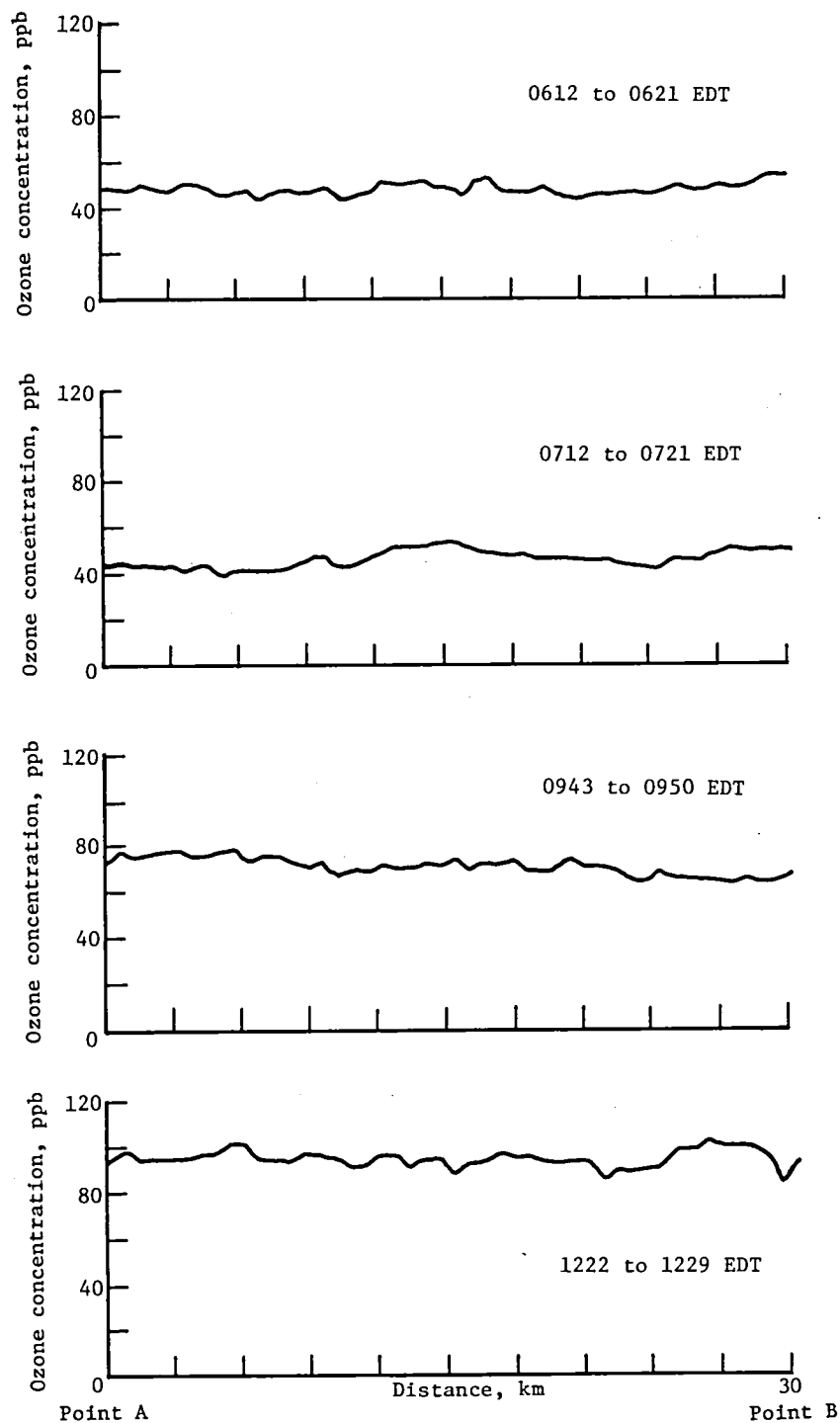


Figure 19.- Ozone concentration on leg A \rightarrow B for photochemical oxidant box experiment on July 24, 1978.

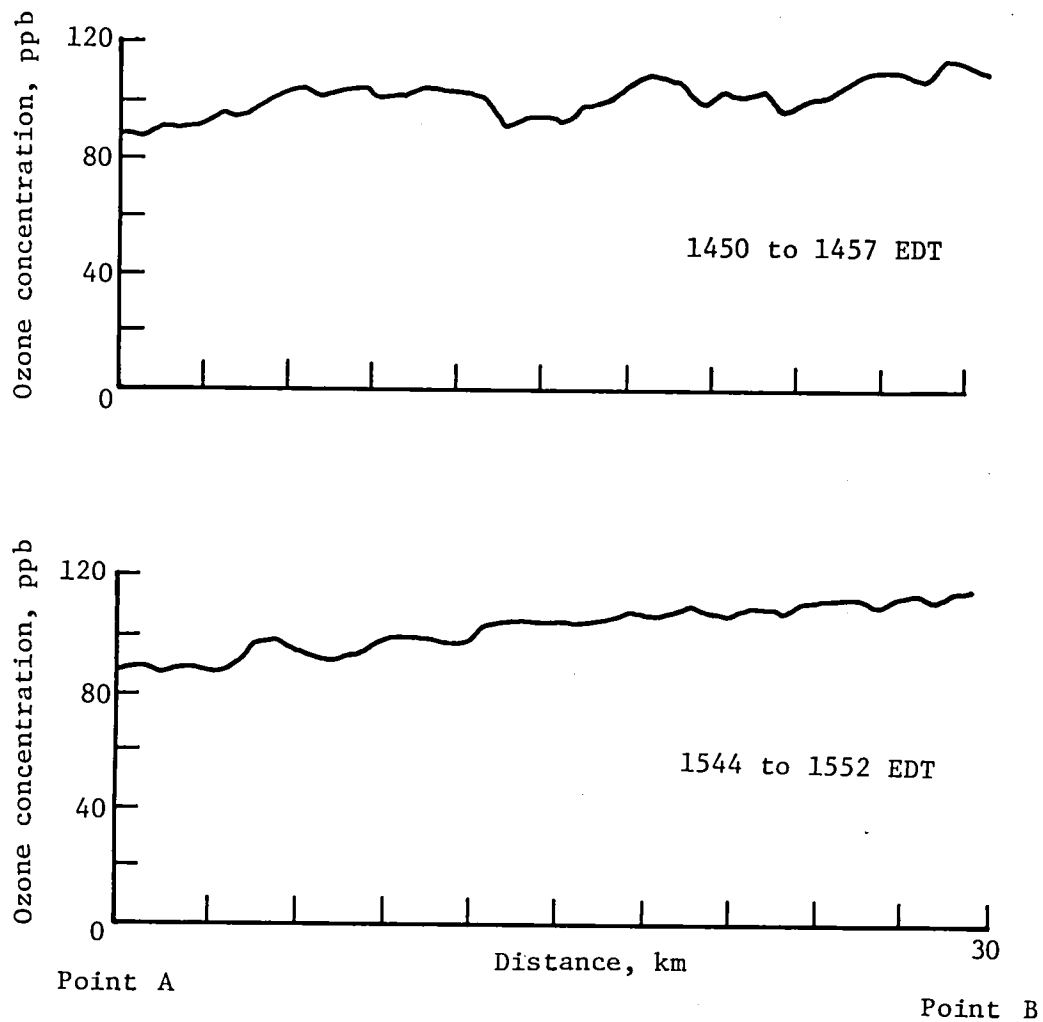


Figure 19.- Concluded.

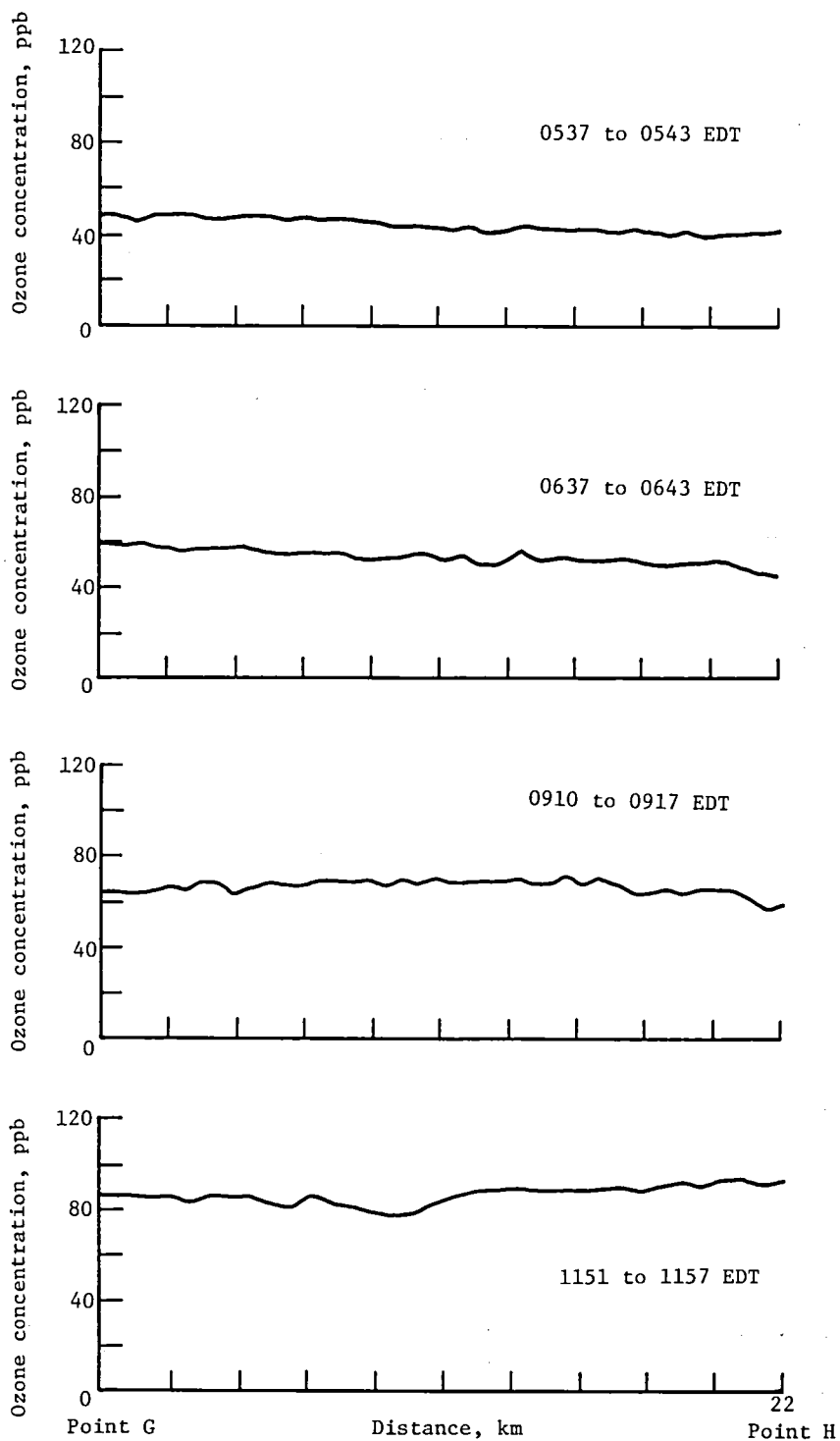


Figure 20.- Ozone concentration on leg G → H for photochemical oxidant box experiment on July 24, 1978.

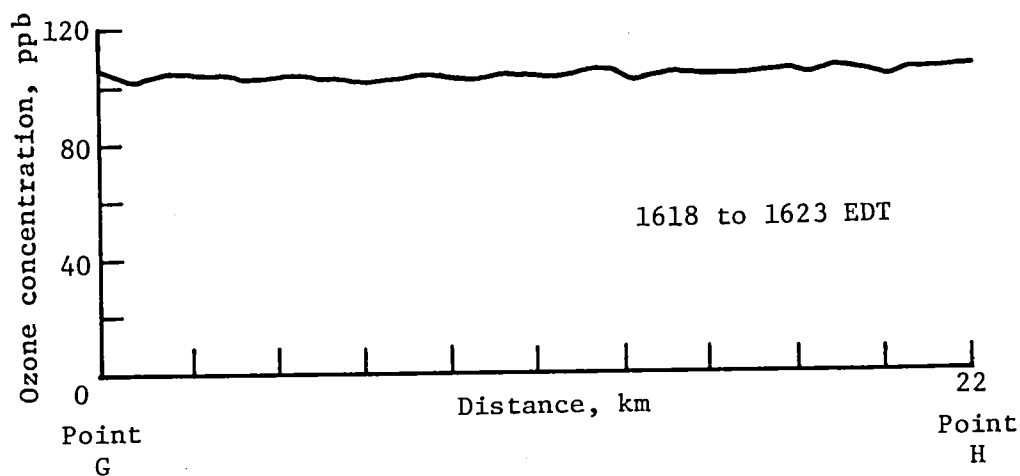
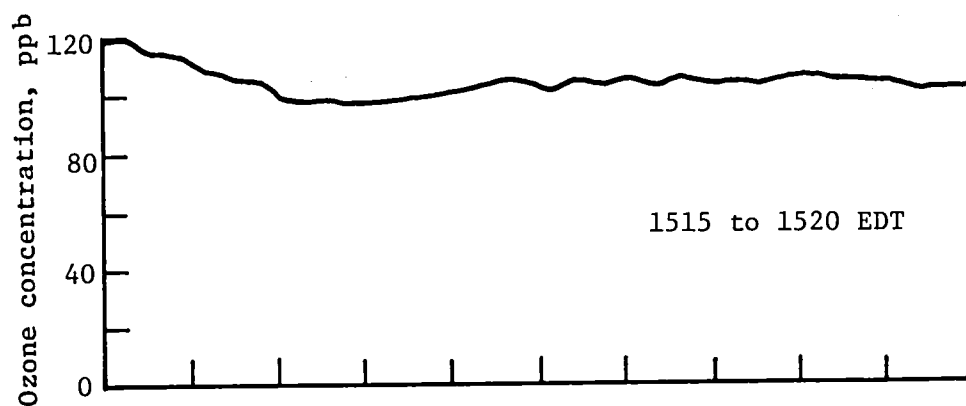
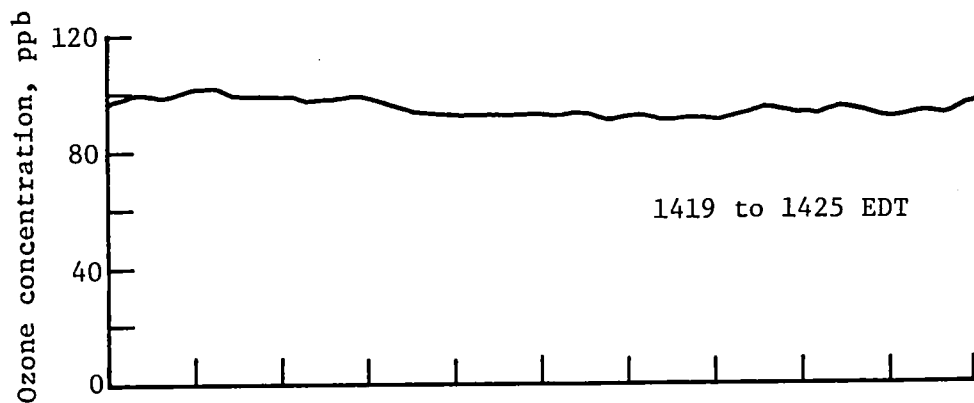
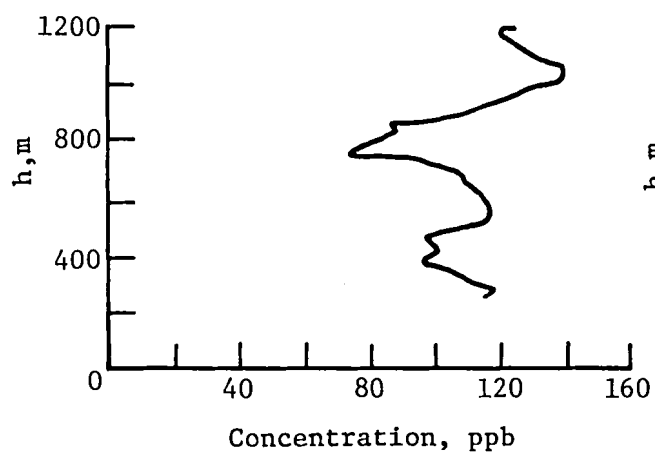
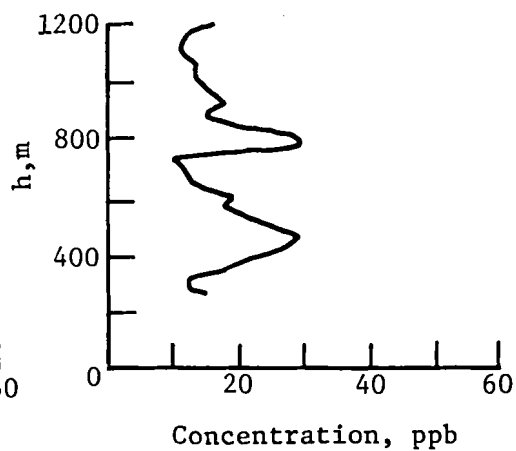


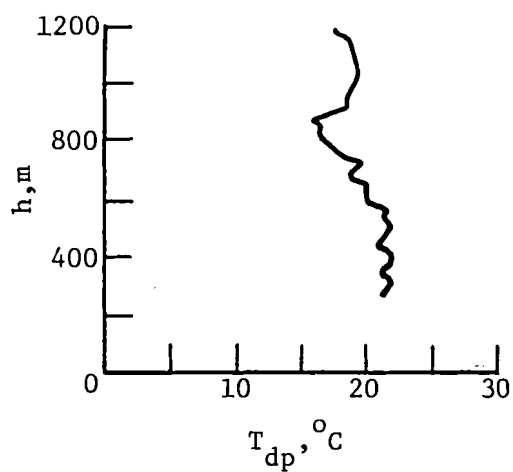
Figure 20.- Concluded.



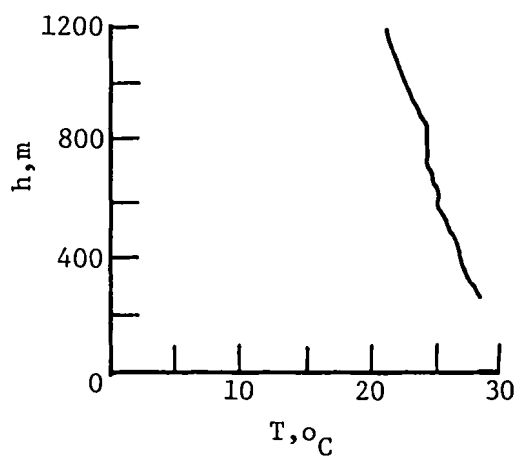
(a) Ozone.



(b) NO_x .



(c) Dewpoint temperature.



(d) Temperature.

Figure 21.- Vertical profile data at point A (1552 to 1558 EDT) for photochemical oxidant box experiment on July 24, 1978.

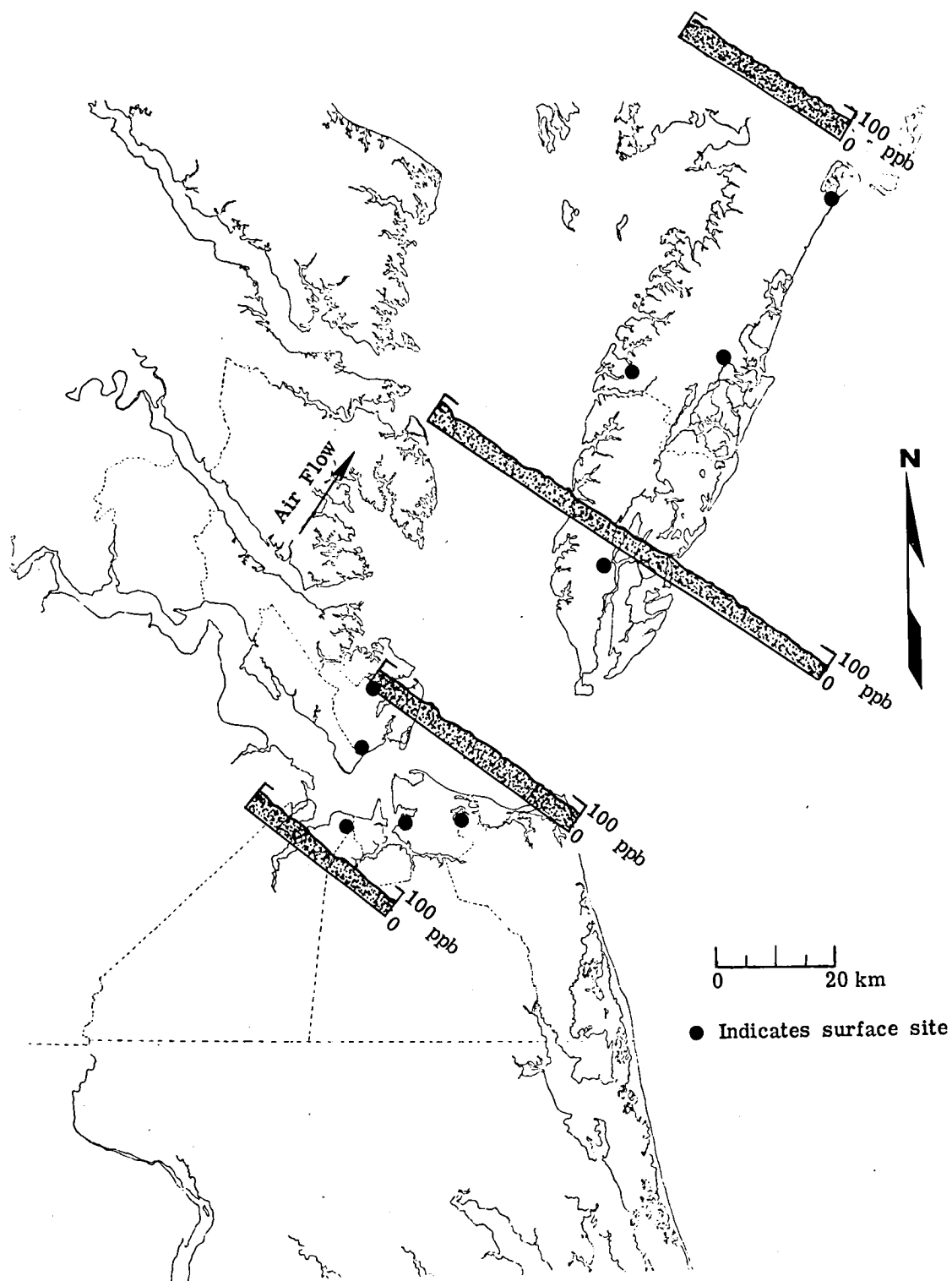


Figure 22.- Ozone data on morning of July 27, 1978.

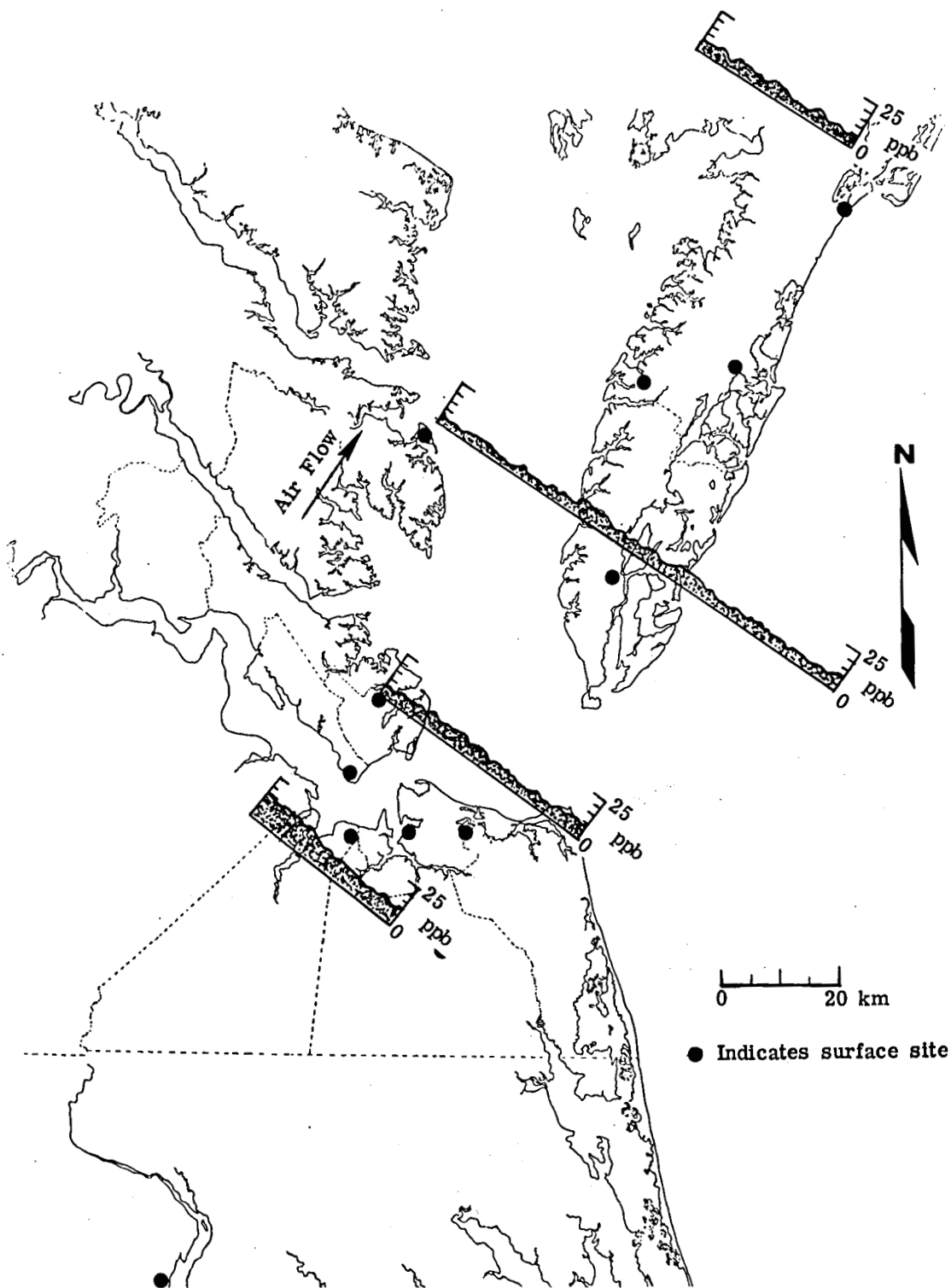


Figure 23.- Nitrogen oxide data on morning of July 27, 1978.

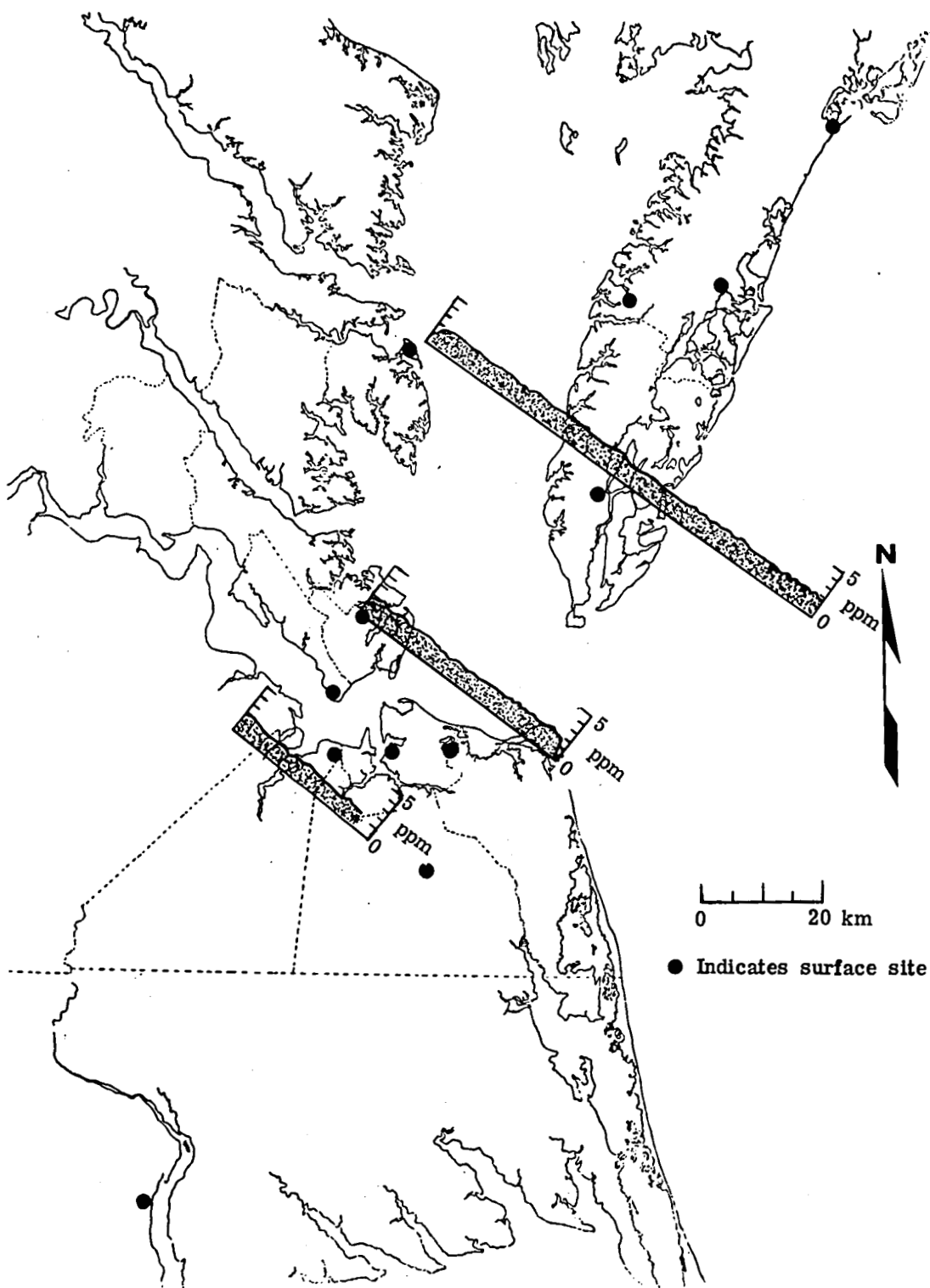


Figure 24.- Methane data on morning of July 27, 1978.

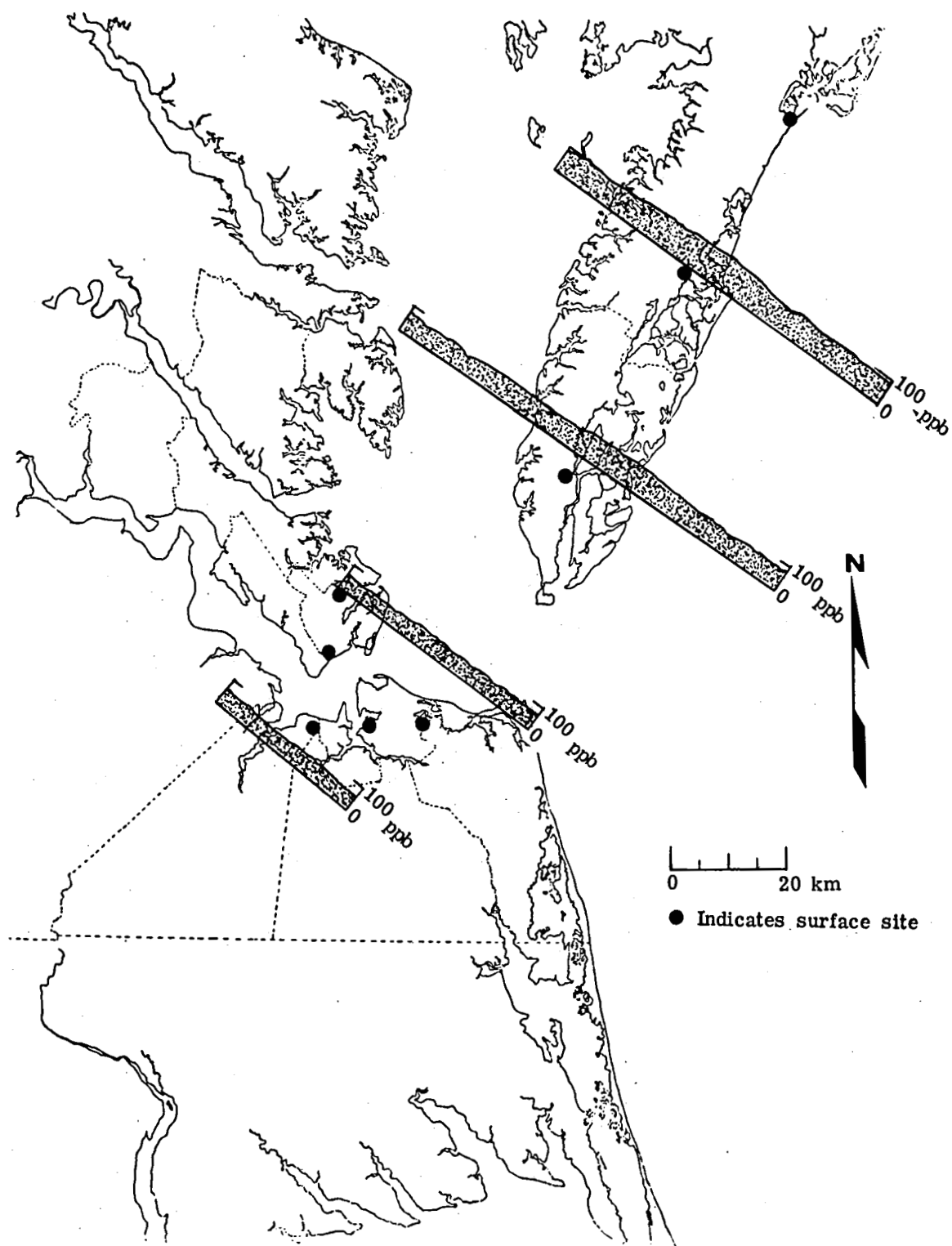


Figure 25.- Ozone data on afternoon of July 27, 1978.

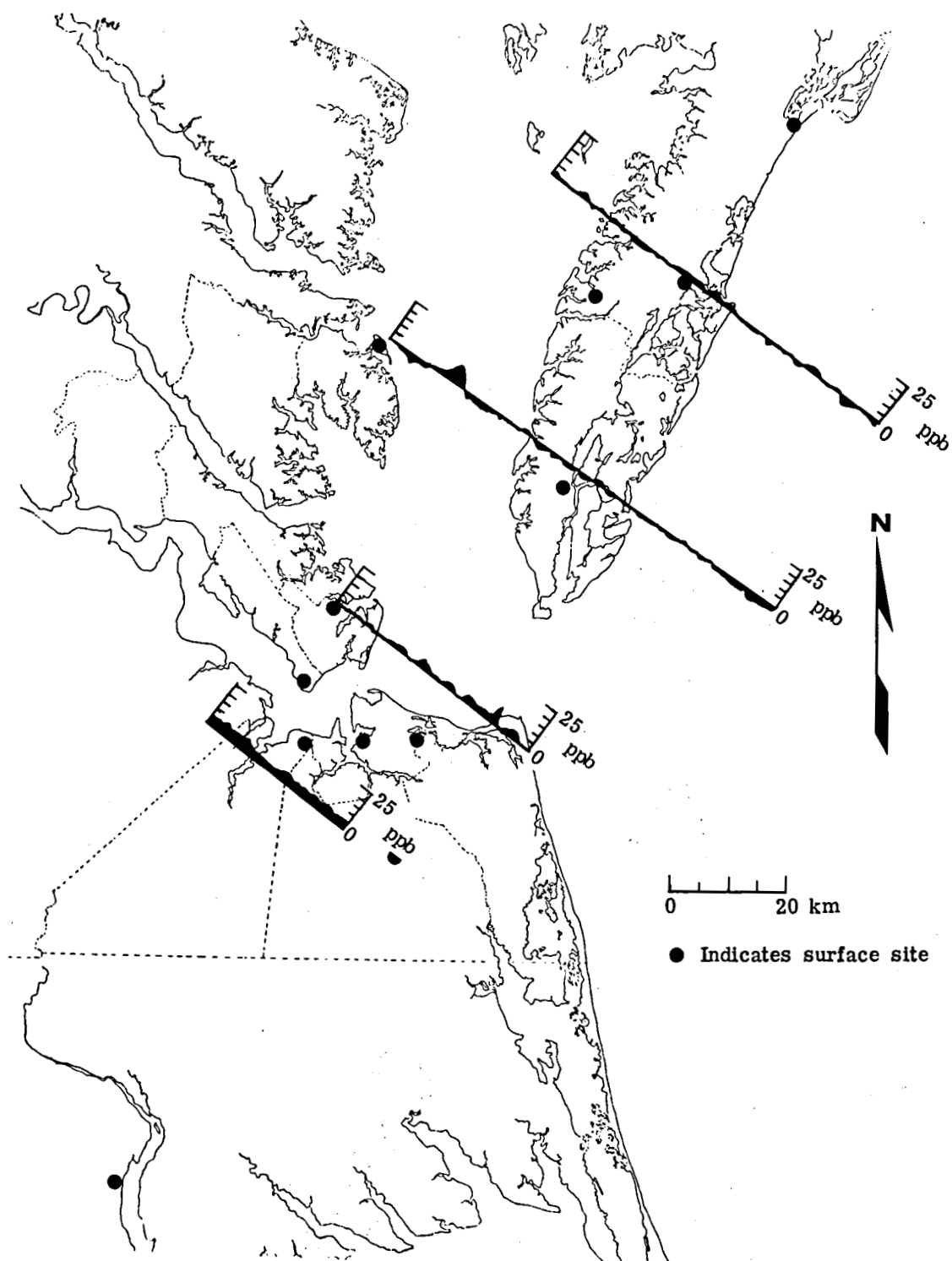
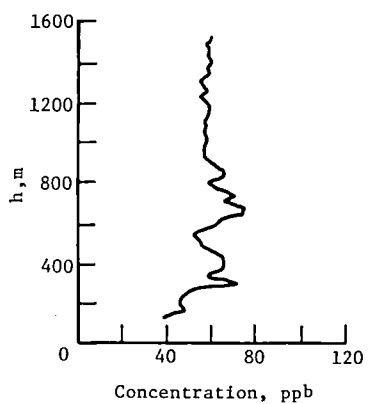
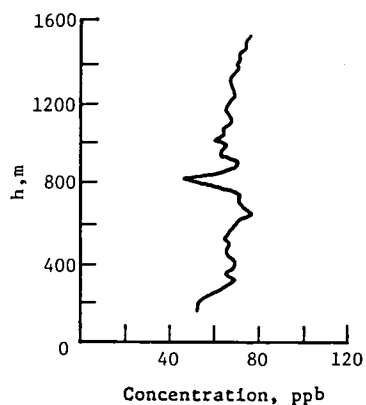


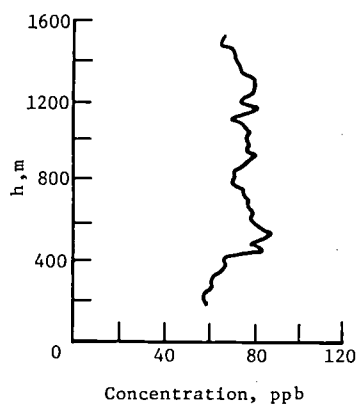
Figure 26.- Nitrogen oxide data on afternoon of July 27, 1978.



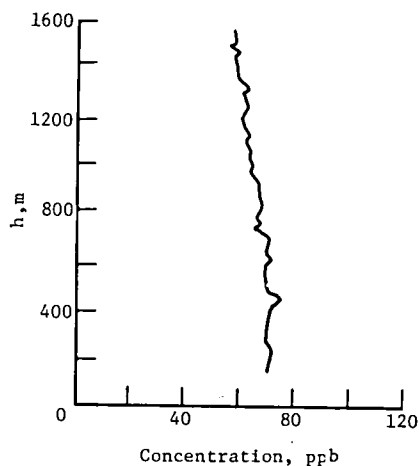
(a) Point L (0908 to 0916 EDT).



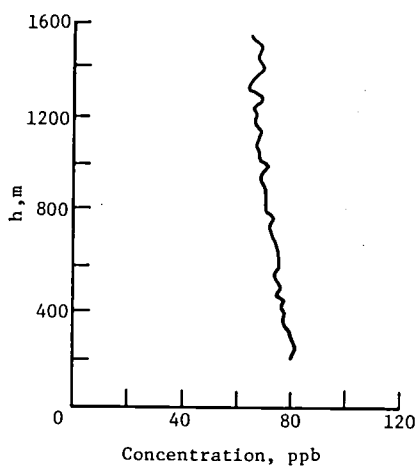
(b) Point E (0947 to 0956 EDT).



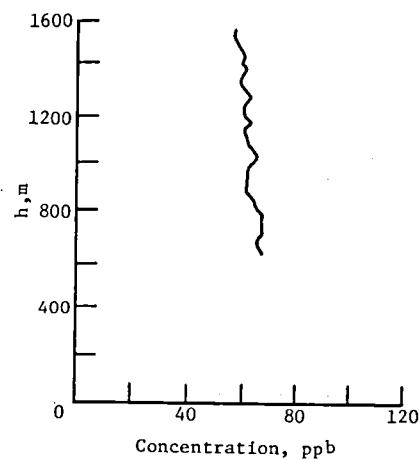
(c) Point B (1051 to 1059 EDT).



(d) Point L (1433 to 1440 EDT).

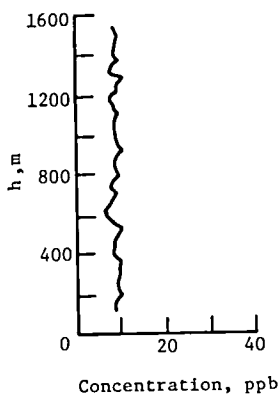


(e) Point E (1511 to 1519 EDT).

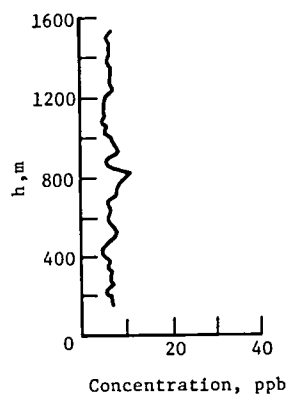


(f) Point H (1701 to 1706 EDT).

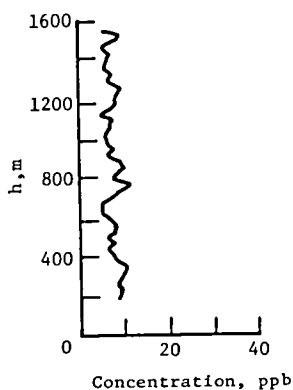
Figure 27.- Ozone profiles for primary experiment on July 27, 1978.



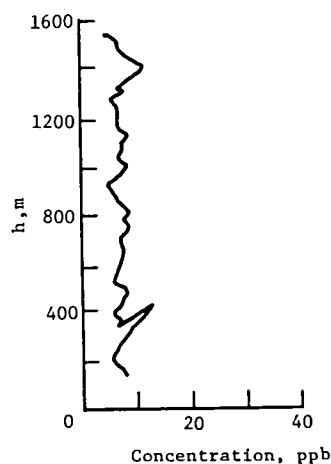
(a) Point L (0908 to 0916 EDT).



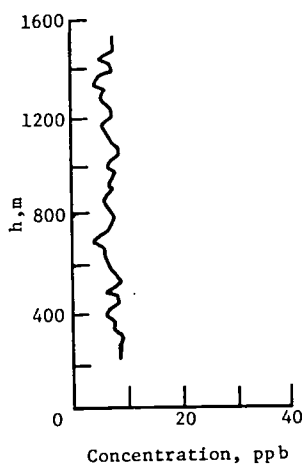
(b) Point E (0947 to 0956 EDT).



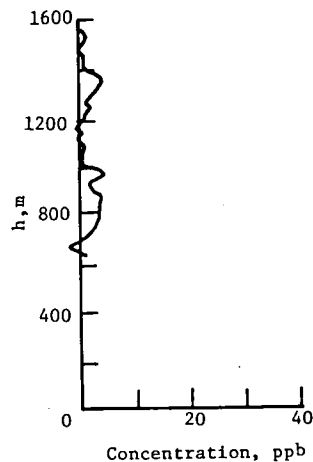
(c) Point B (1051 to 1059 EDT).



(d) Point L (1433 to 1440 EDT).

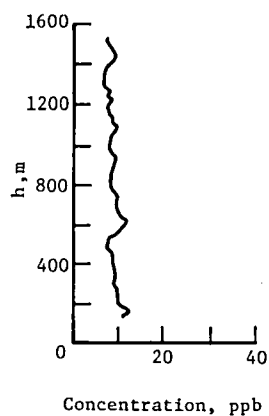


(e) Point E (1511 to 1519 EDT).

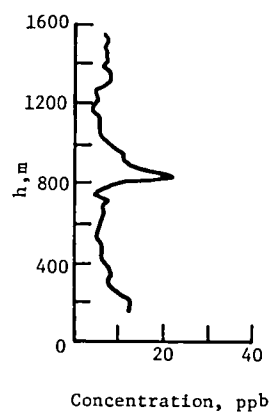


(f) Point H (1701 to 1706 EDT).

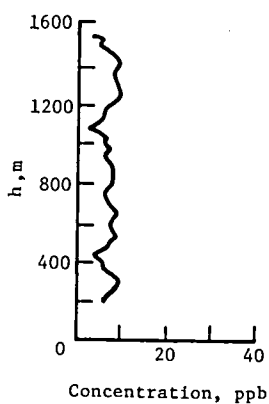
Figure 28.- NO profiles for primary experiment on July 27, 1978.



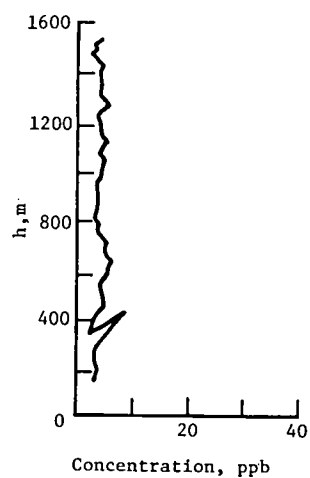
(a) Point L (0908 to 0916 EDT).



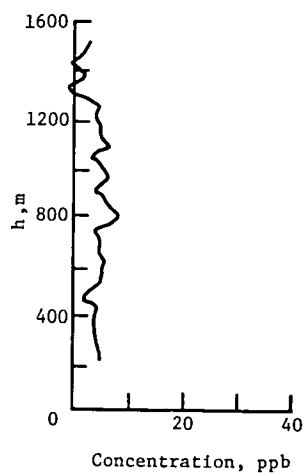
(b) Point E (0947 to 0956 EDT).



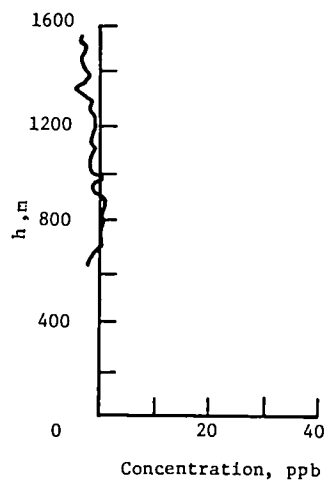
(c) Point B (1051 to 1059 EDT).



(d) Point L (1433 to 1440 EDT).

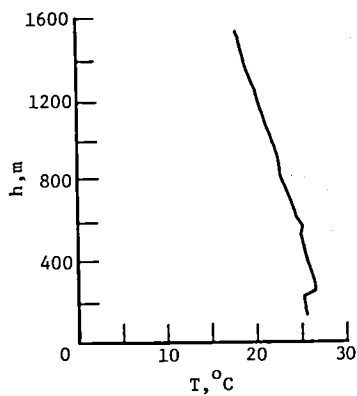


(e) Point E (1511 to 1519 EDT).

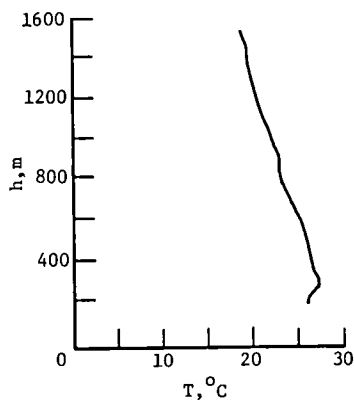


(f) Point H (1701 to 1706 EDT).

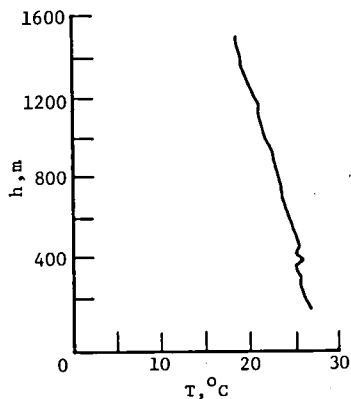
Figure 29.- NO_x profiles for primary experiment on July 27, 1978.



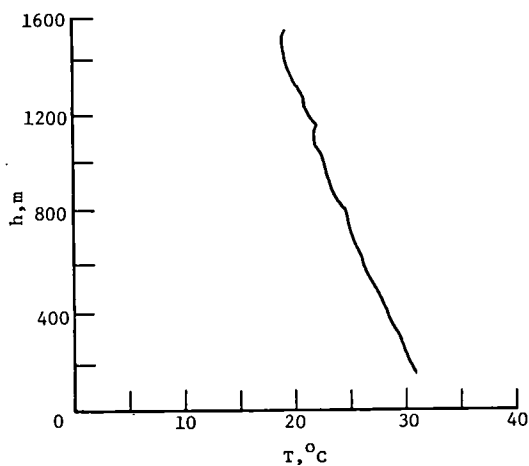
(a) Point L (0908 to 0916 EDT).



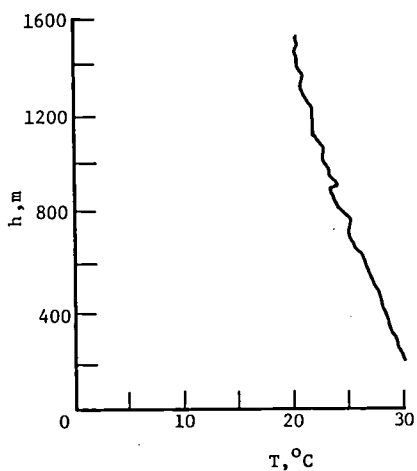
(b) Point E (0947 to 0956 EDT).



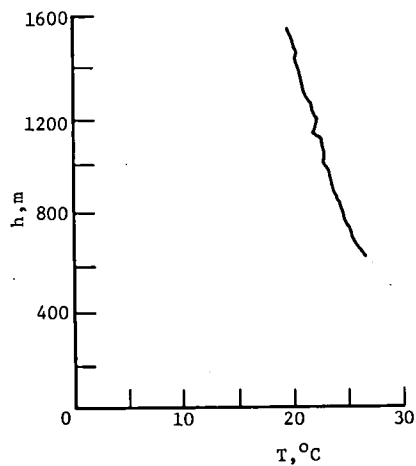
(c) Point B (1051 to 1059 EDT).



(d) Point L (1433 to 1440 EDT).

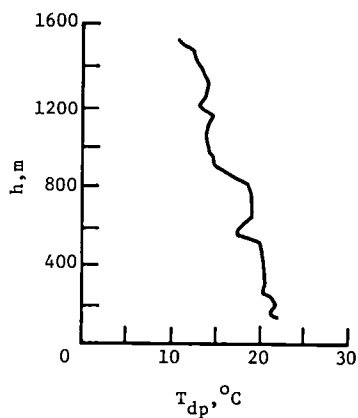


(e) Point E (1511 to 1519 EDT).

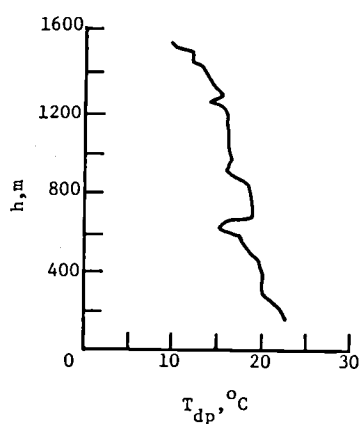


(f) Point H (1701 to 1706 EDT).

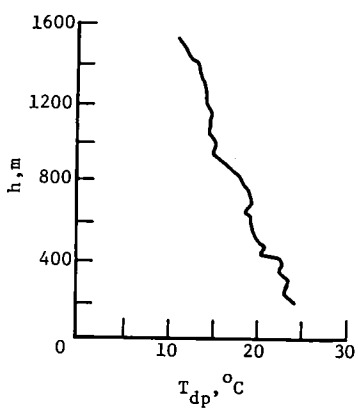
Figure 30.- Temperature profiles for primary experiment on July 27, 1978.



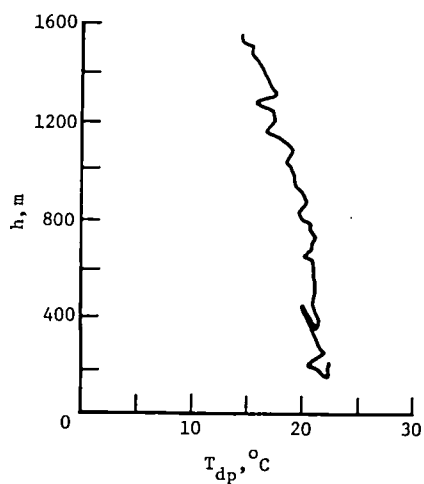
(a) Point L (0908 to 0916 EDT).



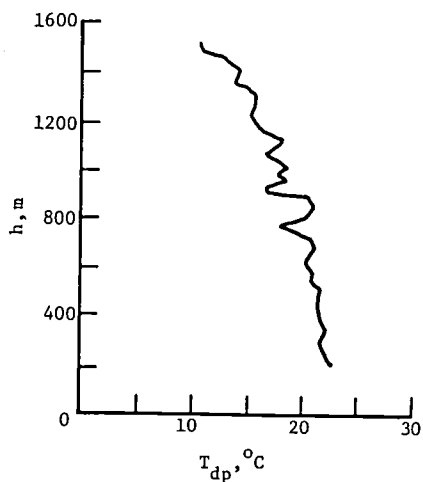
(b) Point E (0947 to 0956 EDT).



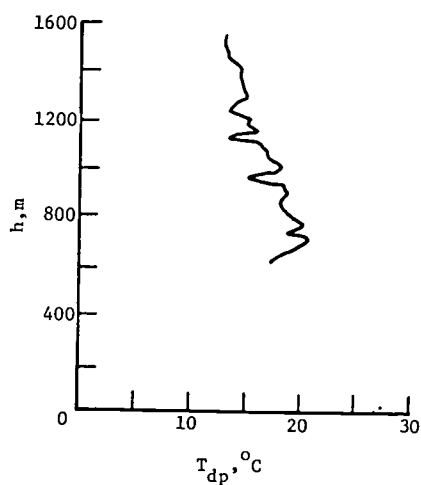
(c) Point B (1051 to 1059 EDT).



(d) Point L (1433 to 1440 EDT).



(e) Point E (1511 to 1519 EDT).



(f) Point H (1701 to 1706 EDT).

Figure 31.- Dewpoint profiles for primary experiment on July 27, 1978.

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16. Abstract <p>The Southeastern Virginia Urban Plume Study is an element in the long-term National Aeronautics and Space Administration (NASA) commitment to develop the necessary technology to exploit the inherent capabilities of Earth satellite systems to monitor the Earth's environment and resources. A number of remote sensing systems that are under development are being used both on aircraft platforms and from surface sites to develop a basic understanding of those environmental problems associated with the troposphere that may be amenable to solution through the use of remotely sensed data. The first phase of the study was conducted in 1977 when airborne and surface in situ instruments were used to characterize the production of ozone downwind of an urban complex. The second phase of the study, in the summer of 1978, also focused on ozone by using aircraft and surface in situ measurements, as well as an airborne remote sensor for ozone, the laser absorption spectrometer. Three aircraft and approximately 10 surface stations provided air-quality data. Extensive meteorological, mixing-layer-height, and ozone-precursor data were also measured. The data from the 3-week field program are reported in separate reports. The subject report summarizes the data from that aircraft that was equipped to monitor ozone, nitrogen oxides, dewpoint temperature, and temperature. Approximately 50 hr (9 flight days) of data are presented. In addition, the report discusses each experiment conducted. The format of this report is data presentation.</p>					
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